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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
They Come Back For More and More
Larry Wray Hits the Ball
New Definitions

Story of the Week

W. G. von Meyer, who directs Copeland's advertising and sales promotion, agrees with the thesis that people run while they read.

In his last two full-page advertisements in AIR CONDITIONING & REFRIGERATION NEWS, he inserted a catchy artist's device in the form of a book-drawing labeled: "Selling Made Easy by Copeland."

This drawing was intended to point up the theme of his advertisements, to wit: the units would "sell themselves."

To his amazement, these advertisements drew scores of orders for that non-existent "Selling Made Easy" book.

"Von" refers all such inquiries to Conjure House, 450 West Fort St., Detroit; and suggests that they order "One Foot in the Door."

They Come Back For More and More

"Von" was pleased to hear that "One Foot in the Door" is being ordered in considerable quantities. Its sales are pyramiding because proprietors of business enterprises, after reading it, send in orders for extra copies for many of their employes and associates.

Old subscribers will forgive us, we hope, for this final mention of "One Foot." Hundreds of new subscribers haven't heard about it, and to them we offer this latest review, from the February *Forum:*

"We've been hearing a lot of this 'story' book with its many anecdotes of John H. Patterson, of National Cash Register Co., who initiated so many selling and promotion ideas now in common practice.

"It measured up to what we heard.

"Just to set its scope, here are a few chapter headings: This is a funny book; the old master and how he got that way; making direct mail respectable; publicity isn't always free; people see better than they hear; there is always one best way to tell your story; ask the man who uses one; everybody loves a sales convention; sales training schools must be clever and entertaining; Mama can help too; ask the man who does the work; tell-all promotion rings the bell.

"There is a long list of celebrities quoted and indexed—from Napoleon Bonaparte to W. C. Fields and Henry Ford and Oscar Levant.

"A book like this isn't for study—it's for enjoyment and laughs—but it also starts the subconscious mind to thinking about one's own selling problems, and perhaps that's better than study for some of us."

Larry Wray Hits the Ball

Laurence Wray, managing editor of *Electrical Merchandising,* has written another exceedingly useful book for our industry, entitled: "The Electrical Appliance Sales Handbook." Published by McGraw Hill Book Co. (price $3.50), it's a book which is a significant contribution to appliance selling.

Wray is convinced that one place where the electrical appliance salesman can make hay is in the rural and small town areas. And he'll convince you, too.

To the hard-working farmer, the appliance salesman is a helpful critter who can save him many

(Concluded on Page 14, Column 3)

Power Slack Hits West Coast Sales

SAN FRANCISCO — Definite restrictions on the sale of electric ranges, water heaters, and space heaters have been invoked here by the California public utilities commission in its efforts to alleviate what has been described as the state's worst electric power shortage.

The shortage is said to be caused by a serious lack of rain and snow plus inadequate power generating equipment.

Under the commission's emergency power conservation program, northern California power companies are required to meet minimum public health, safety, residential, and domestic water supply requirements first.

When this is done, they may connect up to 60% of the load connected in the corresponding month last year.

This, it was explained last week to local appliance manufacturers and wholesalers by the Pacific Gas &

(Concluded on Page 4, Column 5)

Artkraft Co. Names Money Vice President

LIMA, Ohio — R. H. Money has severed his connections with Reynolds Metals Co. and is devoting his full time to his duties as vice president in charge of engineering for Artkraft Mfg. Corp. and its affiliate, Americana Furniture, Inc. of Little Rock, Ark., Morton L. Clark, Artkraft president, has announced.

Money started doing engineering consultation work with Artkraft over two years ago and became an officer and director over a year ago, Clark said. "It is possible he may continue to do some minor consulting work," Clark added.

Money has served as refrigeration advisor to Reynolds, joining that firm in 1946. He was president of the American Society of Refrigerating Engineers during 1947.

Artkraft is currently manufacturing a coin-operated liquid dispenser, a beverage cooler, a combination beverage and food cooler, a table top dual temperature refrigerator, and a home freezer.

Kold-Pak Portable Refrigerator Bows In

LANSING, Mich. — A portable, automatic refrigerator which operates from either a 6-volt automobile battery or 110-volt household current is being introduced by Kold-Pak, Inc., of Lansing.

The unit, small enough and sufficiently light to be carried by one person from home to auto or boat, is expected to find its greatest market among sportsmen and travelers. Hunters or fishermen can carry cold food and beverages to field or stream in Kold-Pak, and immediately refrigerate freshly-killed game or fish, its producers claim.

According to Kold-Pak President H. E. Nickels:

"The unit will do everything the home refrigerator does. It cools foods

(Concluded on Page 4, Column 4)

February Electromaster Range Sales Set Record

DETROIT — Gerald Hulett, vice president, Electromaster Inc., reports that February sales of Electromaster electric ranges were the greatest for any single month in the history of the company, and that distribution of the company's products are still on an allocation basis.

Hulett stated the February sales

(Concluded on Page 4, Column 3)

G-E Says Wage Rise Might Up Prices Generally

NEW YORK CITY — "If General Electric should grant a wage increase, it in all probability would sweep across the country and be imposed on everyone with the necessity of everyone trying to raise prices," General Electric Co. stated last week in notifying the United Electrical, Radio & Machine Workers, CIO, that it did not intend to grant a third round of postwar wage increases.

L. R. Boulware, G-E vice president, contended that granting of new wage increases by a company with plants in many different areas would set a wage increase pattern which other companies in the same areas would be pressed to meet. These companies, he said, would then have to increase prices to cover the wage raises.

In full-page newspaper advertisements G-E cartooned a prize fight in which the referee (labeled the "public") was catching a haymaker from the "unions." "If there were a 3rd round," said the copy "the referee might get knocked out."

The manufacturer said that the union had in the past rejected application of the "ability to pay" principle because of its reluctance to agree that wages would go down when profits went down. G-E also maintained that the "ability to pay" theory was involved in its case because any increase it granted would help establish a new national pattern which would apply to all employers, regardless of ability to pay.

A union assertion that virtually all companies had operated profitably last year was countered with a G-E statement that most companies were operating near the break-even point and that a wage rise without a price rise would put two thirds of all industrial enterprises into a loss position, with accompanying cuts in employment.

The electrical workers union has announced that it is trying to make up for an estimated loss of $12.32 a week in the purchasing power of its members since January, 1945. This is a slight reduction from the $13.03 the union announced as its bargaining goal in January of this year.

Discussion between the union and the Westinghouse Electric Corp. are going forward under a pledge that no information will be given out except through joint statements.

Dealers Sell Puro Water Coolers In New Setup

NEW YORK CITY—Without abandoning its direct selling policy through factory branches, the Puro Filter Co. here has decided to inaugurate a policy of selling and servicing its water cooler line through refrigeration and air conditioning dealers in all parts of the country, the company has announced.

Puro officials stated that dealerships will not be established in the 14 cities where company branches are already located. These are New York City, Albany, Boston, Chicago, Cleveland, Detroit, Los Angeles, Newark, Providence, Philadlephia,

(Concluded on Back Page, Column 3)

Youngstown To Jerk Franchises on Tie-Ins

NEW YORK CITY—Forcing off-brand merchandise onto dealers who want to buy Youngstown kitchen equipment will not be countenanced by the manufacturer and will result in the loss of the Youngstown franchise for distributors who try it, Charles A. Morrow, vice president in charge of sales, for the Mullins Mfg.

(Concluded on Back Page, Column 2)

Stackpole Becomes V. P., Head of Sales for Airtemp

DAYTON—C. S. "Chet" Stackpole of Baltimore has been appointed vice president and general sales manager for Airtemp Division of Chrysler Corp., announces W. C. Newberg, president of the division. Stackpole assumed his new duties on March 1.

Formerly manager of Merchandising and Domestic Sales with Consolidated Gas Electric Light & Power Co. of Baltimore, Stackpole brings many years experience in the sales and merchandising field to Chrysler Airtemp. He joined the Baltimore utility in 1928.

Following graduation from Brown university in 1922, Stackpole was employed by Walworth Mfg. Co. of Boston. He next entered the employ of Stone & Webster through the Blackstone Valley Gas & Electric Co. in Pawtucket, R. I. He then held various executive positions with several gas and electric companies in New England and was later trans-

(Concluded on Back Page, Column 1)

Refrigeration Group In Canada Elects Chief At Convention

NIAGARA FALLS, Ontario, Can.—C. Dowson, of Brantford Refrigerator, Ltd., was elevated from vice president to president of the Canadian Refrigeration Manufacturers Association during the group's first annual convention at the General Brock hotel here Feb. 27.

The organization consists of members across Canada engaged in the manufacture of commercial refrigeration products.

Dowson replaced C. G. Heilig, of Air Coils Mfg. Co., Ltd., who has headed the association for the past two years. Heilig was again nominated for the presidency but asked that his name be withdrawn.

R. H. Lock, of J. H. Lock & Sons, Ltd., was chosen vice president and these directors elected: A. G. Crysdale, of Frigidaire Products of Canada, Ltd.; Philip Hedrich, of Universal Cooler Co. of Canada, Ltd.; Heilig; J. B. McMillen, of KeepRite Refrigeration, Ltd.; and W. Smallwood, of Canadian General Electric Co., Ltd. G. P. McCandless is secretary.

Representatives from more than 25 firms attended the convention. The program included addresses, a luncheon, a general business meeting, and a banquet.

Apprentice training, the refrigeration safety code, and application of the excise tax imposed last November on certain essential parts of refrigeration systems were among topics taken up at the business meeting. The excise tax applies to specified refrigeration and air conditioning equipment when adapted to household or apartment use or when for use in

(Concluded on Page 29, Column 1)

USAirco Sales Will Be Managed by L. P. Hanson

MINNEAPOLIS—Leslie P. Hanson has been elected vice president in charge of sales for the United States Air Conditioning Corp. here, reports A. A. Feinberg, president.

A graduate of the University of Minnesota and 42 years old, Hanson is well known as an air conditioning engineer. He has been with the United States Air Conditioning Corp. for 19 years. Starting in the engineering department, he was subse-

(Concluded on Back Page, Column 4)

Household Unit Sales In January Total 284,726

DETROIT—World sales of household electric refrigerators in January by 11 manufacturers who report their sales to Nema totaled 284,726 units.

This represents a decrease from the 333,631 units sold by the same manufacturers in December, 1947, but is a substantial increase over the 211,074 total reported in January, 1947.

Half of the sales reported in January this year were of cabinets in the 7-cu. ft. size. More than 90% of the models sold were in the 7 cu. ft. or larger classification.

Jordon's Table-Top Model Bows April 1

PHILADELPHIA — A new table-top household refrigerator, made in three different models, is being introduced by the Jordon Refrigerator Co. here and will be ready for shipment to dealers by about April 1, Alfred Levin of Jordon's advertising department has announced.

Called the "Jordonette," the 3½-cu. ft. box will be available in normal temperature, low temperature, and all ice cube maker designs, Levin said.

The Jordonette measures 34½ in. high, 24⅛ in. wide, and 25½ in. deep. It has a porcelain work top and porcelain interior. Exterior of the front and sides is of hi-baked white

(Concluded on Page 29, Column 3)

Nera Report Shows Inventories In Hand

CHICAGO — Dealers are not yet overstocked on major appliances, although they report a heavy inventory of radios, according to the report issued by C. C. Simpson, managing director of the National Electrical Retailers Association, on a monthly survey of members' inventory which started in February.

The survey was inaugurated on an experimental basis, to see what could be learned from dealer inventory figures.

Replies to the questionnaire were received from 38 states. Reports were made by dealers having an annual sales volume of less than $75,000 up to an annual sales volume of over half a million dollars a year.

Results of the first survey are indicated below:

Home Freezers
83% average 4 per dealer
17% reported no inventory

Radios (AM, FM, television)
84% average 38 per dealer
16% reported no inventory

(Concluded on Back Page, Column 2)

Appliance Credit Drops $64 Million In January

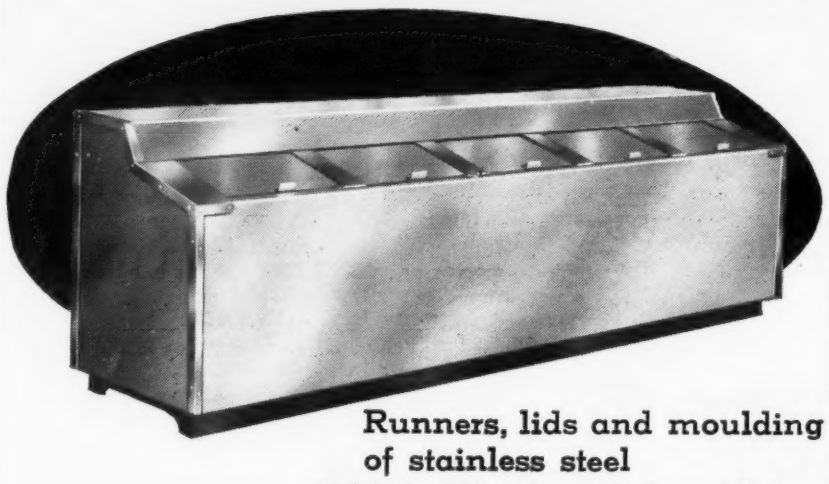
WASHINGTON, D. C. — Though total instalment credit increased by $22 millions in January, credit extended to purchasers of refrigerators, washing machines, radios, and home furnishings declined by $64 millions, the Federal Reserve Board has reported.

Instalment credit in this category totaled $1,624 millions in January and, despite the decline, was still 65% higher than a year ago, the Board declared.

ROGERS Dry Beverage Cooler

With disappearing lids

Allowing every section to be used simultaneously.



Runners, lids and moulding of stainless steel

39" high; 30" wide; 4, 6, 8, or 10' long.

Write for catalogue showing this quality line of refrigeration.

DEALERS WANTED

Write, wire or phone today for information on franchise.

Immediate Delivery!

W. ALLEN ROGERS Industries

BOX 272-AC DEMOPOLIS, ALA.

Launderall Advertising To Give 'Unbiased' Facts On Automatic Washers

DETROIT—An "unbiased explanation of all the facts about automatic washers" is promised in one of a series of newspaper advertisements being prepared by the F. L. Jacobs Co. here, maker of the Launderall automatic home laundry.

The advertisement will be part of a cooperative nationwide advertising campaign being launched this month by the factory and Launderall distributors and dealers, states Edward A. Ash, director of the appliance division.

This particular advertisement will be entitled "You Should Know All the Facts About Automatic Washers." Copy will discuss whether the automatic machines are hard or easy on clothes, hot water, and soap. It will stress the fact that automatics are now beyond the experimental stage and will attempt to answer questions on automatic home laundries in general.

The advertisement will further highlight the outstanding features of the Launderall and will provide a check list of seven questions to acquaint prospective buyers with features desirable in an automatic washer.

"We feel that the approaching peak seasonal sales months make this an opportune time to tell the public about the merits of automatic washing machines, and to boost the entire automatic washer industry," Ash said.

Refrigerator, Full of Food, Sells for $199

CINCINNATI—A "nationally famous" 7½-cu. ft. refrigerator, stocked with food, for only $199 was advertised in a full-page spread in a Cincinnati newspaper last week by a local furniture and appliance store.

The advertisement said the refrigerator manufacturer's name was withheld on request.

Inserted by the Republic store at 420 Main St., the advertisement offered the refrigerator for immediate delivery, complete with food, on "long, easy terms" with payments as low as $1.95 per week.

Food included with the refrigerator consisted of a 10-lb. (approx.) ham, 1 lb. link sausage, 2 lbs. bacon, 2 lbs. cold cuts, ½ lb. dried beef, 2 lbs. weiners, 3-lb. (approx.) cottage ham, 2 doz. eggs, 3-lb. frozen chicken, 1 lb. lard, 3-lb. can of Spry, 1 lb. margarine, 1 lb. butter, 2 lbs. Velveeta cheese, and 1 jar of mayonnaise.

The refrigerator was offered with a five-year guarantee. It was described as having a large storage space for frozen foods, cold control conveniently located at top, and inside illumination that automatically turns on when door is opened.

Cooperative Advertising Set for G-E Disposall

BRIDGEPORT, Conn.—A cooperative advertising plan for General Electric disposall units, under which G-E and its distributors will assume 50% of the cost of approved dealer advertisements, has been announced by the General Electric Co.

The plan is expected to continue to operate throughout the remainder of the year, though G-E reserves the right to terminate or amend any part or all of the plan upon written notice.

The company said that newspapers and radio stations approved within the past year for current cooperative advertising are acceptable for the present campaign. However, eligible media must be approved in writing by G-E to its distributors.

Dealers desiring to use this plan were urged by the company to use G-E advertising mats in preparing their advertisements in order to assure uniform message and a closer tie-in with national advertising.

Electromaster Inc. Nets $289,298 for 1947

DETROIT—Electromaster Inc. reports net profit after taxes for year ended Dec. 31, 1947 of $289,298, equivalent to 48 cents per share of common stock.

In the previous year net profit after credit for tax carry back was $96,970, equivalent to 16 cents per share.

L. K. Ward Stores Include Protection on Price Rise For Future Delivery Orders

LOS ANGELES—Improving on an offer made nearly one year ago, L. K. Ward Stores has publicly stated that it will not only guarantee to protect the customer against an appliance price drop, but also against a price increase.

In the first case, according to Ward's advertisement in a local newspaper, the customer would receive a cash refund amounting to the difference between the purchase price and the new lower level. In the second instance, the price originally agreed upon would hold despite any upward adjustment by the manufacturer.

(Readers may recall an article on a similar offer by Ward's which appeared in the April 14, 1947 issue of the NEWS.)

As outlined in the newest advertisement, however, the guarantee of a cash refund would obtain only for a 100-day period following date of purchase.

"Again I repeat my offer of price protection," the advertisement began, "an offer which no other retailer of appliances in southern California has dared to match!

"I agree to refund in full, for a period of 100 days from date of purchase, any reduction in the list price effected by the manufacturer on any appliance listed in this advertisement."

The list which followed included five lines of refrigerators, eight lines of electric ranges, five lines of home freezers, 11 lines of gas ranges, five lines of washers, five brands of complete kitchens, three makes of television sets, and a line of dishwashers.

In the matter of the two-way price guarantee the advertisement continued:

"If prices increase, I will deliver your appliance at the price agreed upon regardless of when you want delivery.

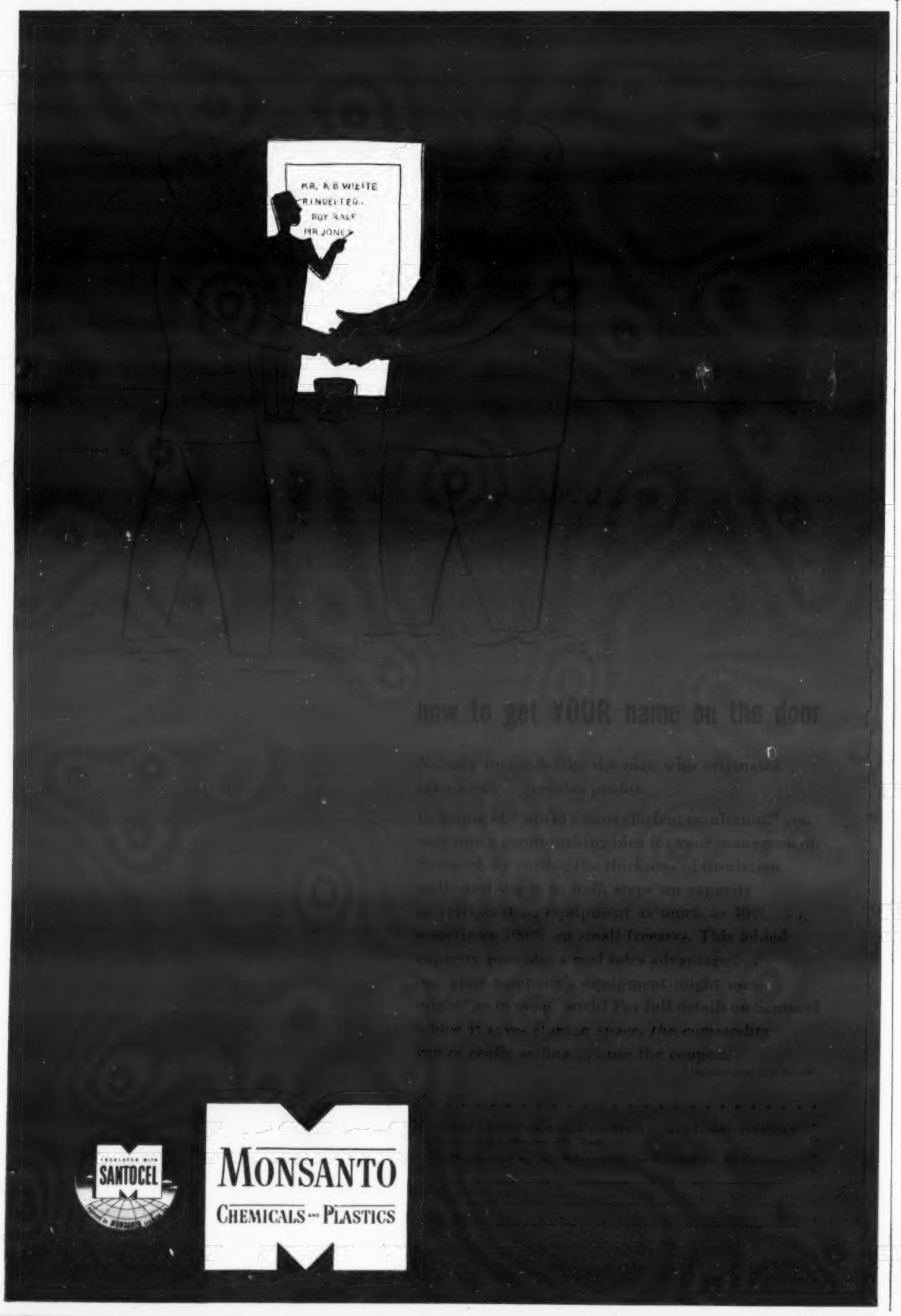
"If prices decrease I will give you a refund in full for the difference between the price you paid and the new lower price established by the manufacturer."

There are a total of 10 L. K. Ward stores in the Los Angeles area.

J. J. Stangel Hardware Co. To Distribute Crosley Line

CINCINNATI—Appointment of the J. J. Stangel Hardware Co., of Manitowoc, Wis., as Crosley distributor in Northern Wisconsin and Upper Michigan, has been announced by Corley W. Kirby, domestic sales manager, Crosley Division, Avco Mfg. Corp.

The company which is headed by Arthur G. Stangel, president, and Harvey J. Stangel, vice president, was founded 30 years ago by the late Jacob J. Stangel and handles lines of hardware, automotive parts, industrial equipment and mill supplies.



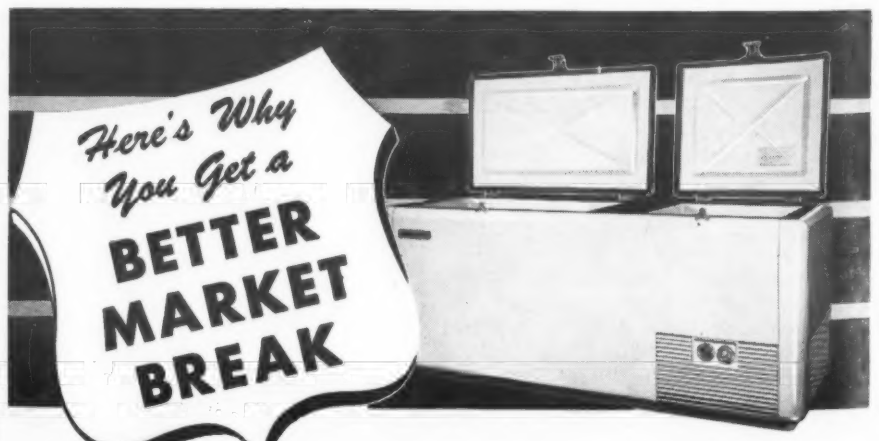
how to get YOUR name on the door

Nobody suggests like the man who originates sales ideas . . . generates profits.

Is Santocel® still the most effective insulation? You may make a profit-making idea for your management. Suppose, by using Santocel, the thickness of insulation walls and ceiling in half, steps up capacity in refrigerated equipment as much as 30%, sometimes 100%, on small freezers. This added capacity provides a real sales advantage. Is your company's equipment right now? Is it "as up to date" as it could be? For full details on Santocel—how it saves storage space, *the commodity you're really selling* . . . use the coupon.

SANTOCEL

MONSANTO CHEMICALS AND PLASTICS



in BEN-HUR Farm and Home Freezers

A COMPLETE LINE to suit ALL Home Needs — Farm and City. **FOUR MODELS** — 6,9, 12.5 and 18 cubic foot sizes.

EXTRA VALUE in precision-engineered features that assure improved food protection, longer service.

POWERFUL NATIONAL ADVERTISING — Over 6 million readers mean a big prospect list, easier selling.

NATION-WIDE REPUTATION—Thousands of owners are your best boosters for BEN-HUR Freezers.

COMPLETE SELLING MATERIAL — Sales Manuals, Colorful Display Materials, New Direct Mail and Counter Folders — all come to you regularly.

FREE NEWSPAPER AD MATS — Fit all occasions, all seasons, for effective local tie-in.

Check Them All . . . and you'll choose the BEN-HUR Line

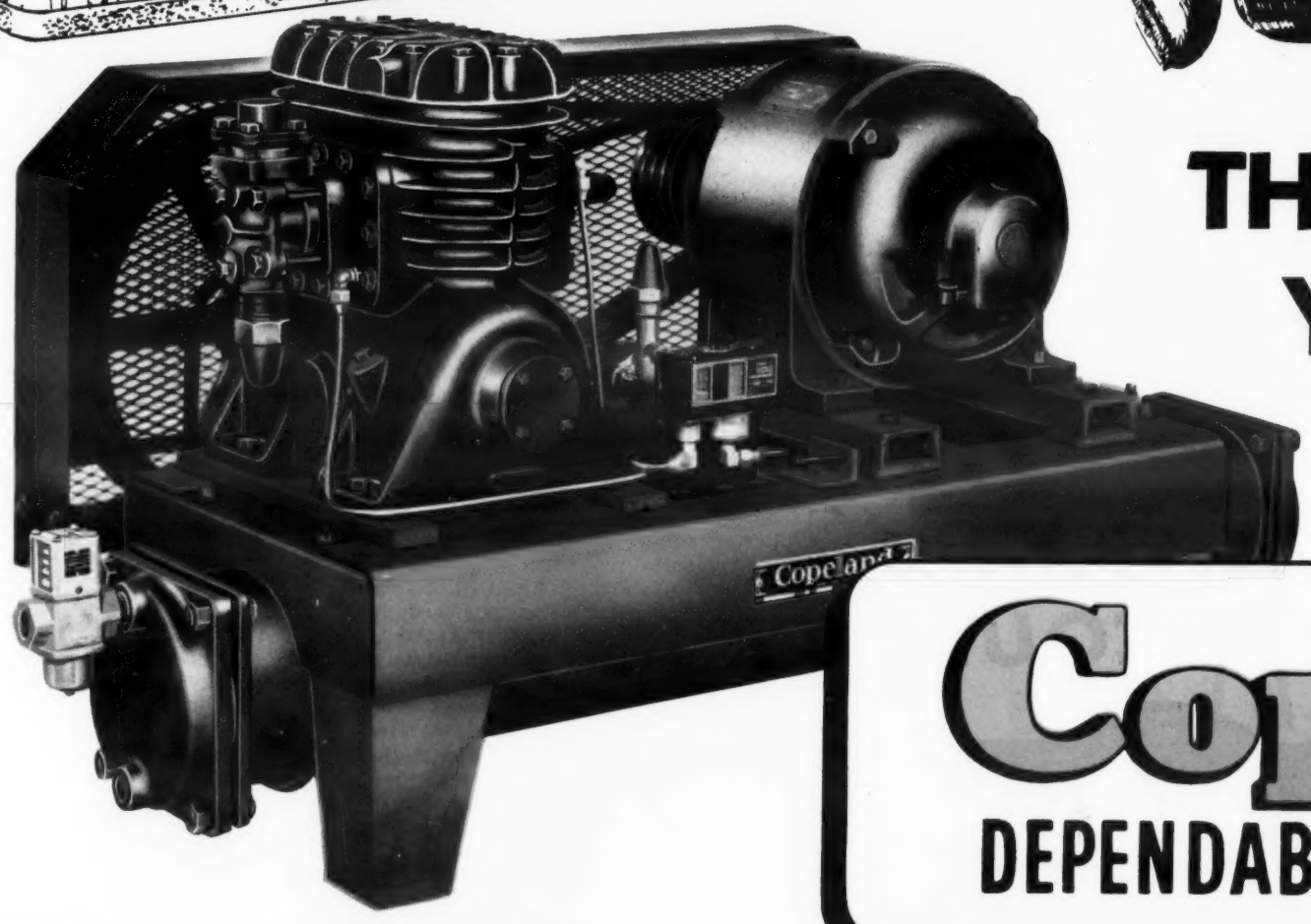
Some Choice Territories Still Open . . . Write

BEN-HUR MFG. CO., Dept. AC 634 E. Keefe Ave. MILWAUKEE 12, WISCONSIN

BEN-HUR FARM and HOME FREEZERS

HEALTHFUL LIVING THROUGH FROZEN FOODS

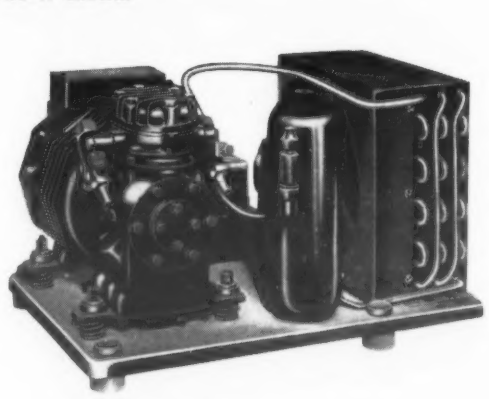
THEY'LL SEE YOU QUICKLY ABOUT....



Copeland remote units are sturdy, compact. Air-cooled models from ¼ H.P. to 3 H.P. inclusive. Water-cooled models from ⅓ H.P. to 7½ H.P. Model 750-W shown.

Copeland

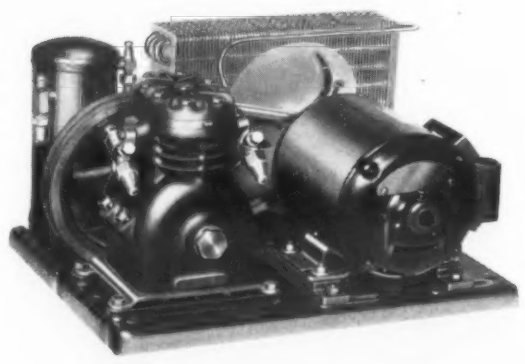
DEPENDABLE *Electric* REFRIGERATION



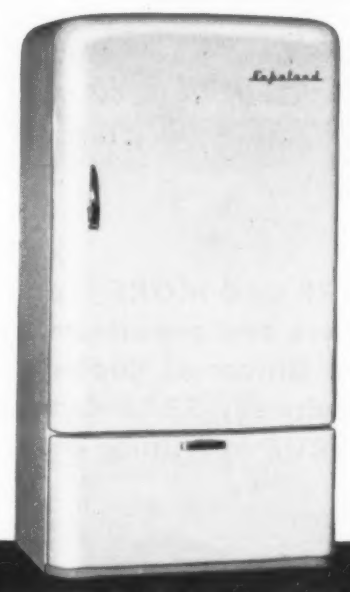
Copelametic, the Accessible Hermetic, combines the best features of welded-in and open-type units. Eliminates belts, seals, manual oiling. Models from 1/20 H.P. to ¾ H.P. Model K-33 is shown.

Copeland's reputation opens doors. Copeland makes selling easier with a complete line, field-proved performance and consistent promotion and advertising that continually points out Copeland superiority to every refrigeration prospect in your territory.

Compact belt-driven units for self-contained installation range from 1/6 H.P. to ½ H.P. A model for every range of refrigeration temperature. Model 334 is shown.



Copeland electric water coolers and household refrigerators are smart-looking, low-cost in operation, thoroughly dependable. Shown are the PB-10 water cooler and the CD-489, 9 cubic ft. Deluxe Refrigerator.



COPELAND REFRIGERATION CORPORATION • SIDNEY, OHIO

New York Office: 71 West 23rd Street

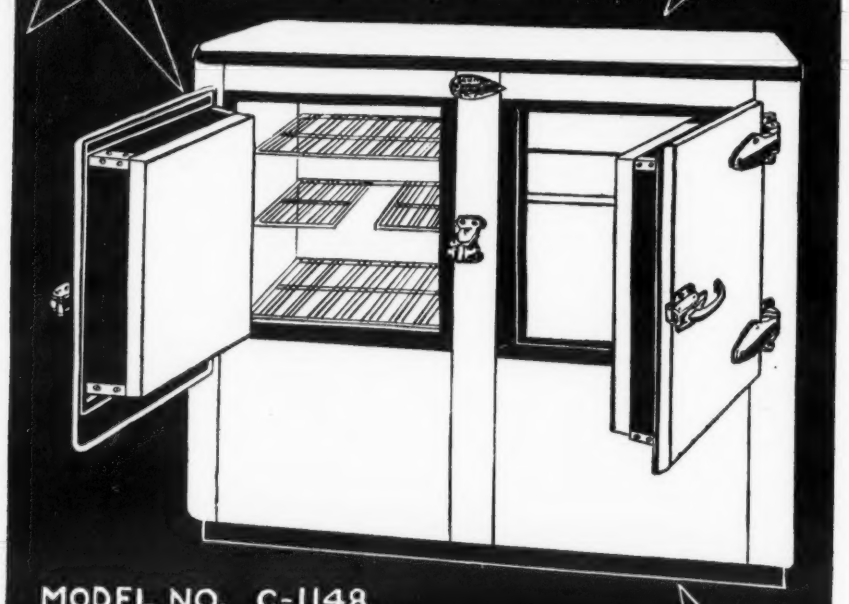
Export Department: 60 Wall Tower, New York City

Quicfrez TRIZONE

NORMAL REFRIG. TEMP.

FAST FREEZE

SANITARY'S PREWAR COMBINATION
Farm Freezer is again available for immediate shipment..... Suggested consumer price only $399.50.....



MODEL NO. C-1148

4½ cu.ft. of 35-50 F. Refrigeration combined with 6¼ cu.ft. of zero frozen storage.
Size: 48½" w. x 28"d. x 40¾"H.
Frozen meat capacity - 250-300lbs.
¼ H.P. hermetic, quiet-type condensing unit
60 cycle 115 volts A.C.

FROZEN STORAGE

SANITARY REFRIGERATOR CO. FOND DU LAC, WIS.
ICE REFRIGERATORS FOR MORE THAN 40 YEARS FARM FREEZERS SINCE 1939

V. P. of Artkraft Co.

R. H. MONEY

He'll devote full-time to Artkraft post.

Electromaster Sales--

(Concluded from Page 1, Column 2)

figure was 71.8% greater than the corresponding month of 1947 and 10.4% more than the previous month of January.

"Distribution of Electromaster ranges is still on an allocation basis," commented Hulett. "Distributors from various sections of the country tell us there is a continuing and strong demand particularly for the 40 in. model with the "oven eye"; and the 21 in. sized model.

For Use In Home or Trailer

This new Kold-Pak automatic portable electric refrigerator hits the market this month. While it is designed primarily for sportsmen, it can be used on picnics or in trailers, the manufacturer said. When not hooked up to an ordinary household electric outlet, the refrigerator operates from a 6-volt automobile battery.

* * *

Kold-Pak Portable--

(Concluded from Page 1, Column 2)

and beverages to any desired temperature; it freezes and makes ice cubes. The box is large enough to hold several days' supply of perishable food, yet small enough to be portable."

Invented by E. E. Judge, president of Industrial Metal Products, Inc., the unit is the product of four years' research. Judge developed the idea of a portable refrigerator for sportsmen while on a pheasant hunting trip to South Dakota, presuming such a box would aid hunters in returning birds to their homes.

Others expected to find practical use for Kold-Pak include doctors (for storing serum and temperature-sensitive drugs); photographers (keeping film at correct temperature and using ice cubes to chill developing liquids); scientists (arresting growth or deterioration of cultures); veterinarians (carrying medicines requiring temperature control while making calls).

The unit may also be used in bachelor apartments or by hotels.

The refrigerator is 22 in. long, 14 in. wide, 15 in. high. The exterior, a grey, wrinkle finish, covers 2-in. insulation. The 1/15-hp. motor operates only about 15 minutes out of the hour, it is claimed. "Freon-12" refrigerant is used, and the motor may be removed without losing the gas charge.

The corporation also manufactures a portable dry ice refrigerator that is said to keep perishables for three days with 2 lbs. of dry ice.

Besides Nickels, officers of the firm are E. E. Judge, Jr., son of the inventor who is vice president, and Alton B. Parker, secretary-treasurer. George B. Johnson is sales manager.

West Coast Power - -

(Concluded from Page 1, Column 2)

Electric Co., puts the servicing of new 220 volt appliances way down on the list.

Installations of such equipment in new homes or as replacements to existing gas equipment will have to follow priority requirements. However, replacement of existing 220 volt electrical appliances in old homes will not be restricted. The utility, in pointing out this market, estimated that there were approximately 30,000 electric ranges in its territories that are 10 years old or older.

As part of the conservation program the public has been asked to curtail its use of power in the home by over 10%. Utility officials indicated that if this request was not voluntarily complied with, more stringent action that might affect regular plug-in appliances would probably be taken.

Power delivery to manufacturers using 500 kwh. or more has been cut 20%. These firms also face the possibility of a one day per week shut down if present measures to conserve power prove to be insufficient.

Store fronts in the San Francisco Bay area have been browned or blacked out all this month. As an additional effort, daylight saving time was expected to become effective in the state March 14.

Faced with this situation, appliance buyers have been reported cancelling or restricting their purchases of 220 volt appliances. Some have been shifting their sales emphasis to gas appliances.

N. Y. Dept. Store Sales Drop 3% During Week of March 6

NEW YORK CITY—New York department store sales during the week ending March 6 dropped to a level 3% below the comparable week last year.

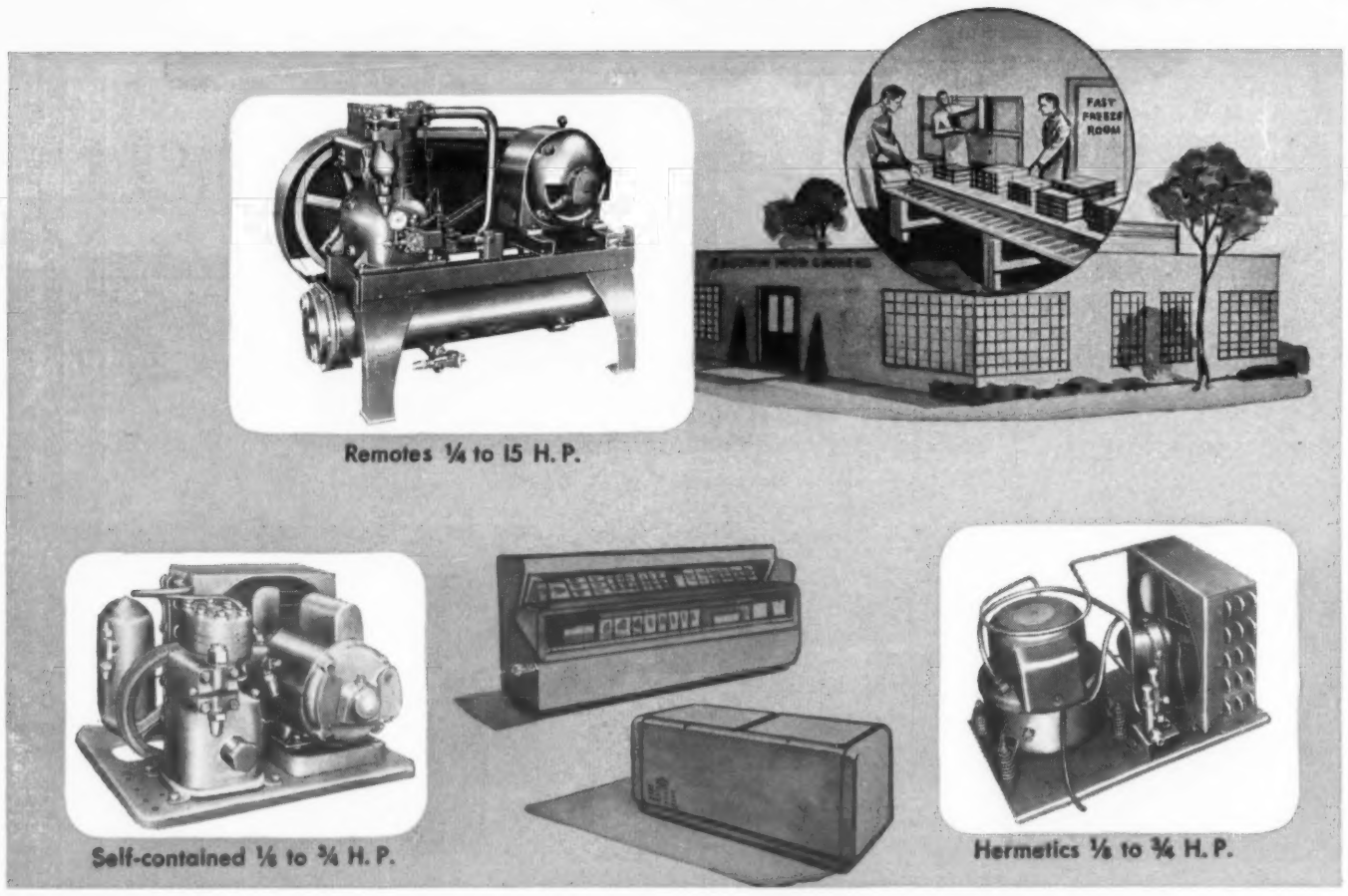
Local department store executives considered this drop significant in that Easter comes a week earlier this year than last and Easter shopping should be getting under way.

The Federal Reserve Bank, however, reported that for the four week period ending March 6, sales gained 2% over the same period during last year.

IN FROZEN FOODS

DEPENDABILITY AND ECONOMICAL OPERATION

REALLY COUNT!



• MORE and MORE frozen food handlers and processors are turning to Universal Cooler Condensing Units for REAL dependability and TRUE operating economy . . .

You'll see Universal Cooler Refrigeration Condensing Units installed in many of the farm and home freezers and processing equipment displayed at the Frozen Foods show. Our engineering department will gladly furnish data showing how you, too, can benefit from our 26 years of experience and engineering know-how.

UNIVERSAL COOLER

1922—1948 26 YEARS OF PROGRESS

DIVISION INTERNATIONAL DETROLA CORPORATION

MARION, OHIO • BRANTFORD, ONTARIO

SOME TERRITORY NOW AVAILABLE

Walk-ins that grow with the merchant's business

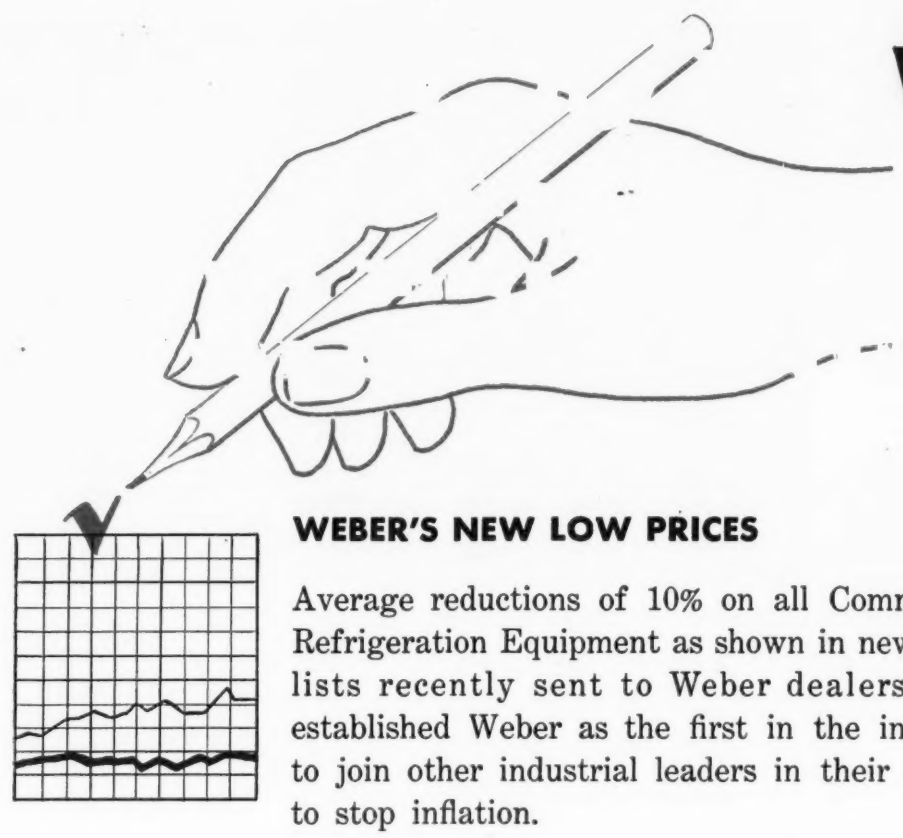
Reach-ins with coiling that is different

A Dry Beverage cooler with quicker cooling

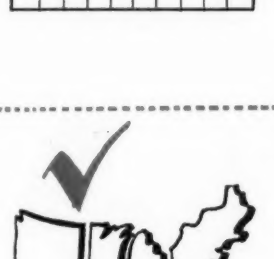
QUALITY THESCO SINCE 1870

THE C. SCHMIDT CO

CINCINNATI FOURTEEN OHIO



WEBER'S *50* YEARS' EXPERIENCE OFFERS THESE ADVANTAGES FOR DEALER SUCCESS



WEBER'S NEW LOW PRICES

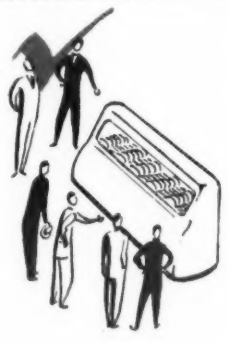
Average reductions of 10% on all Commercial Refrigeration Equipment as shown in new price lists recently sent to Weber dealers have established Weber as the first in the industry to join other industrial leaders in their efforts to stop inflation.

FOUR SALES REGIONS

In order to more efficiently provide its dealers with the proper tools to do a selling job, Weber has divided the United States into 4 sales regions, each having its own Regional Office. The West —Los Angeles... The Midwest—Chicago... The East--New York... The South—to be announced.

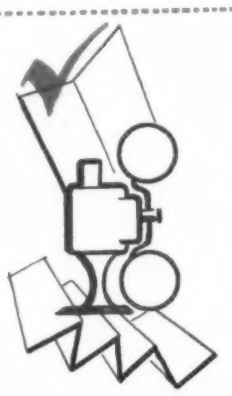
A "HOME OFFICE" IN EACH REGION

Each of the four Regional Offices will be in charge of a Regional Manager who will have a complete Sales, Service, Store-planning, and Training staff under his direction. Thus, in effect, each Regional Office will be a "home office," with the entire resources of the 50-year-old Weber Company available to each dealer right in his own territory.



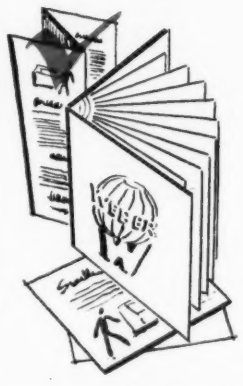
EACH REGION A COMPLETE UNIT

Each Regional Office will have its own showroom and warehouse facilities. Personnel will include a Store Planning Specialist, Soda Fountain Sales Specialist, a District Manager, a Service Manager, an Office Manager, and a Retail Sales Manager. This decentralization of warehouse stocks and sales organization will result in faster deliveries, fast product servicing and closer personal contact between company, dealer and customer.



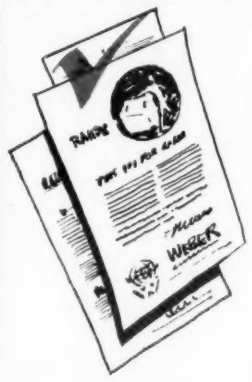
TRAINING AIDS

Each region will provide Weber Dealers with specialized training help in both merchandising and servicing of Weber Equipment... more aids for the dealer who knows the most effective selling today is by helping the merchant in merchandising his store—in caring for his equipment—so as to increase his sales and profits.



SELLING AIDS

Each region will provide its dealers with the finest selling aids ever turned out by any manufacturer of refrigeration equipment. A completely informative Retail Sales Manual, a comprehensive pocket-size Data Book, Weber Organizational Book, a Service Manual, and special Presentation Folders containing valuable merchandising hints will be included in this material.

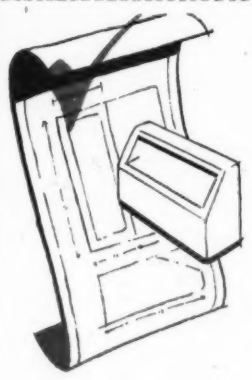


ADVERTISING

The most extensive advertising campaign in Weber history is now under way. Attention-getting, hard-selling ads in national and regional publications, descriptive literature, as well as co-operative dealer ads for local newspaper insertion, will call attention to Weber products, Weber quality, develop leads and prepare the way for the dealer to step in and do his selling job.

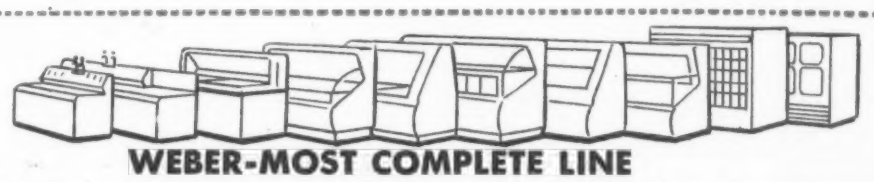
MARKET ANALYSIS

Each region will have continuous market analysis to keep its dealers ahead of competition as to current trends, market potentials and other factors important in helping them get their share of local business and in developing new outlets for Weber products.



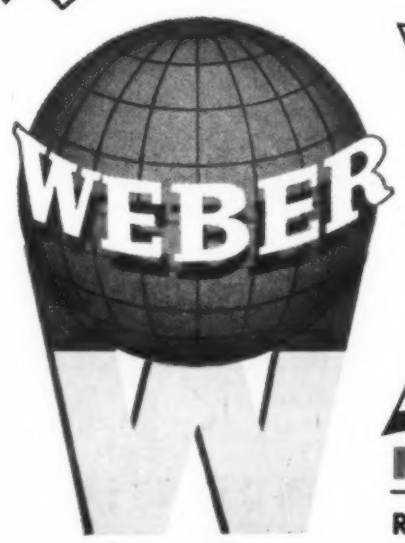
PRODUCT REFINEMENT

The entire Weber line of products is undergoing extensive re-engineering processes, and production methods are being improved to insure that everything possible will be done to uphold Weber Quality and keep the Weber name ahead of the field.



WEBER-MOST COMPLETE LINE

The Weber Dealer represents the *most complete* line of refrigerated equipment in the world. Whether soda fountains, ice cream cabinets, frosted food cases, meat cases or walk-in refrigerators, he beats competition by offering all required equipment to any retail place of business under one name, with one responsibility, from one organization.... the finest in the world.... WEBER.



the best news yet...

EXCLUSIVE DEALERSHIPS ARE AVAILABLE

If you are interested in discussing our Exclusive Weber Dealership, contact us immediately, today, if possible, so that an appointment can be arranged for you through our Regional Offices.

WEBER SHOWCASE & FIXTURE CO., INC.
5700 Avalon Boulevard • Los Angeles 54, California

FOOD GUARD REFRIGERATED EQUIPMENT

REGIONAL OFFICES AND WAREHOUSES IN PRINCIPAL CITIES

'Salad Service, Please'

Different-Temperature Reach-In Sections Keep Chef's 'Specialty' Salads Crisp

SAN ANTONIO, Tex.—A battery of stainless steel refrigerated compartments, operating at different temperatures according to the nature of the contents, has completely solved the problem of furnishing hundreds of salads to the guests of the St. Anthony hotel, San Antonio, according to Henry Sauvin, chef.

The refrigerator, located directly across from the chef's cooking area in the St. Anthony kitchen, consists of nine stainless steel compartments, each provided with a double-pane glass door, more than 4 in. thick.

Compartments are 2½ ft. wide by 8 in. high, and due to thermostatic controls, and utilization of various amounts of coil surface in each compartment, it is possible to provide temperatures ranging anywhere from 25 to 45° F. throughout the various compartments.

The St. Anthony hotel is famous for a variety of specialty salads, as well as fruit plates, served in the Sunroom, Coffee Room, Pierraux Room, Anacacho Room, the Tapestry Room, and the Cascade Room. In addition, the hotel's famous salad and fruit plates are served to frequent parties, banquets, and large-scale convention meetings, which often necessitates as many as 7,500 dinner salads being prepared at a time.

The 9-compartment salad refrigerator is utilized for building up "advance requirements" for the average luncheon and dinner load, all "dinner salads" being standard combination salad, lettuce and tomato, cottage cheese and pineapple, nut salads, etc., which are on the menu as part of a specific meal.

By making up all dinner salads in advance, and completely stocking the compartments with the proper temperature according to the ingredient of the salad, Chef Sauvin has been able to keep his salad preparation crew entirely free for the making of "Chef's special" salads, salad bowls, fruit and salad combinations. The latter, all main courses, are all prepared to order, with the salad preparation crew entirely relieved from the responsibility of mass-producing dinner salads for more standard orders.

Coldkraft Refrigeration Opens

LOS ANGELES — Coldkraft Refrigeration Co. is the firm name under which Gerald W. Hillis has published a certificate that he is conducting business at 927 North Alvarado St., Los Angeles.

Brides Will Be Cooled Off

ROCHESTER, N. Y.—A new air conditioning system is one of the major improvements in the remodeled Graver's Bridal Shop here.

Production Levels Off After Reaching Peak

NEW YORK CITY—American industrial production stopped rising in February and even started a slight decline, the business survey committee of the National Association of Purchasing Agents noted in its March report.

Poor weather conditions were given a share of the blame for this. Reflections from the declining commodities market were also named as affecting the new business trend.

Only 18% of the companies studied showed an increase in their backlog of new orders as compared with 30% in January, according to the committee. However, 60% reported an unchanged but satisfactory order position, it added.

"On the whole, purchasing agents express confidence in the immediate future, looking on the market drop as a necessary and healthy adjustment long overdue, and are prepared to proceed with caution," the committee's report stated. "Industrial production is being maintained at previously reported highs."

The purchasing agents saw a drift to a buyer's market, however, and declared that "these deflationary forces, continuing to grow, will probably affect the general price structure in the not too distant future."

At present, it noted, prices that are declining are those directly connected with the speculative commodities market. With the exception of steel, all others items are leveling off.

Industrialists are tending to tighten up their inventories and to keep as closely as possible to current production needs, it said.

New Gemco Sales Staff Gathers

The entire air conditioning sales staff of the General Engineering & Mfg. Co. (St. Louis) put in an appearance at the recent ASHVE Show in New York City. Standing before two "Miracula" heat pumps are: (front row, left to right) James Lamb, service manager; R. D. Elgin, south central regional manager; Charles J. Davis, southeast regional manager; Norman B. Schreiber, chairman of the board and general manager; Harry B. Osmundsen, northeast regional manager; and B. T. Cline, north central regional manager. (Back row) J. Y. Hewitt, general sales manager; F. A. Deniston, special representative (heat pump division); F. H. Eldredge, sales promotion-advertising mgr.; D. R. Hofmann, southwest regional mgr.; and Ralph M. Skinner, midwest regional mgr.

Refrigeration Aids Omaha Blood Bank

OMAHA, Neb. — A new public health activity for Omaha, in which specialized refrigeration is an extremely vital cog, has begun here with the opening of the Omaha Red Cross blood bank at 2549 Farnam St.

Taking of blood donations at the bank, one of the first in the country, began late in February, with a major piece of equipment being a new, commercial-type, four-section refrigerator designed to keep 8,000 pints of blood at proper temperature.

The blood drawn at the bank is never open to contamination, and goes into a sterile bottle which contains a citrate solution to prevent blood clotting. The bottle is not opened even for testing, and serology tests, typing, and crossmatching are done at the hospital from blood samples contained in three small test tubes attached to the bottle, and kept carefully refrigerated.

The donor is given refreshments at the blood bank and is invited to rest in the comfortable surroundings as long as he likes, but the blood he has given starts immediately on its life-saving course. First, it is placed in the blood-bank refrigerator to cool over night. Tests are run the next day, and the blood is prepared for delivery to the hospitals where it is given free of charge to patients in need of transfusions.

The blood bank now is answering emergency calls for blood, and the Red Cross Motor Corps will make regular deliveries as soon as a sufficient reserve is built up in the storage refrigerator to warrant stock deliveries. At that time, hospitals will call in each morning, requesting their day's supply of blood. An operating budget of $24,500 has been set for the blood bank for 1948, while the cost of buying the refrigeration equipment and establishing the bank was taken from reserve Red Cross funds.

In the blood bank laboratory, serology tests on blood samples are run on a table directly in front of the series of refrigerated storage compartments, while the blood also is immediately placed under refrigeration upon delivery to the hospitals.

, It's not HOW MUCH moisture you remove from a refrigeration system that counts...

It's HOW LITTLE moisture is left!

SPORLAN

To really dry a system...install a SPORLAN Catch-All

THE CATCH-ALL IS AVAILABLE IN ⅓, ½ AND 1 TON SIZES

...THE PERFECT FILTER-DRIER!

1 The unique porous cylinder of the Sporlan Catch-All is molded of minute particles of a highly efficient desiccant, whose efficiency is greater than that of the same desiccant in granular form.

2 The Sporlan Catch-All after being completely assembled is activated to a high degree of dryness which, in turn, assures drying the system to an extremely low end point.

3 Immediately after activation, the Sporlan Catch-All is sealed with moisture proof seals so that it can not pick up any moisture before installation.

4 Due to its molded construction, the Sporlan Catch-All cannot powder. Therefore, none of the desiccant can pass into the system, causing expensive breakdowns.

5 Again, due to its molded construction, the Sporlan Catch-All cannot pack. Packing of the desiccant in an ordinary drier causes a high pressure drop, which is never present in the Catch-All.

6 And again, due to its unique molded construction, the refrigerant cannot channel around the desiccant of the Sporlan Catch-All. All of the refrigerant must go through the molded porous cylinder.

7 In addition to efficiently drying the refrigerant, the molded porous cylinder of the Sporlan Catch-All will catch all scale, solder particles, carbon, sludge, dirt or any other foreign matter as minute as 9 microns with negligible pressure drop.

The use of oversize driers does *not* solve the moisture problem on most jobs. The only real solution is to use a drier that dries down to a *low end point*... a point *so low* that any remaining moisture is absolutely harmless!

HERE IS WHY THE SPORLAN CATCH-ALL IS THE PERFECT FILTER-DRIER

If you want refrigeration systems that are REALLY DRY... *install* SPORLAN *Catch-Alls and get Peak Performance on all installations.*

SPORLAN VALVE CO.
7525 SUSSEX AVENUE, ST. LOUIS 17, MISSOURI
*THE CATCH-ALL IS OBTAINABLE AT ALL SPORLAN WHOLESALERS

First and Only!

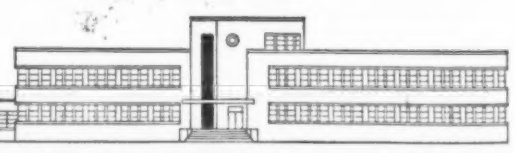
Load Carrying 2-POLE SWITCH

DIRECT READING Calibrated Scale

PENN 270 SERIES

Write now for Bulletin No. 2652 with full details about the Penn 270 Series refrigeration and air conditioning control that sets a new standard of versatility, simplicity, efficiency and dependability. **Penn Electric Switch Co., Goshen, Indiana.** Export Division: 13 E. 40th St., New York 16, U. S. A. In Canada: Penn Controls, Ltd., Toronto, Ontario.

PENN



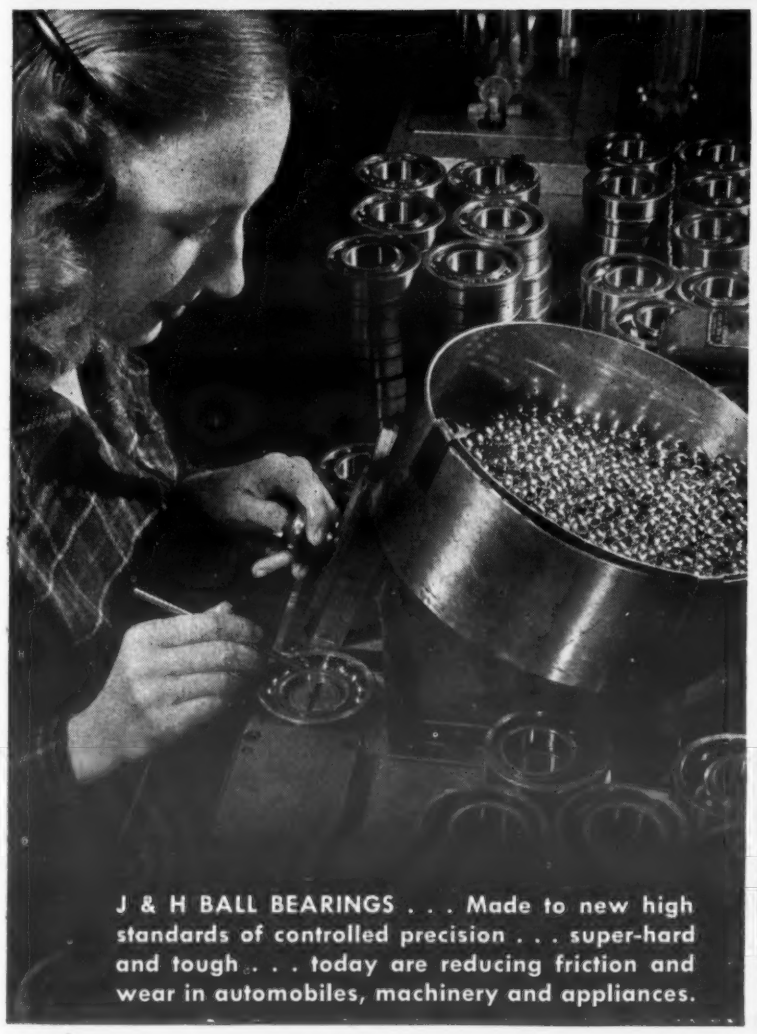
AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

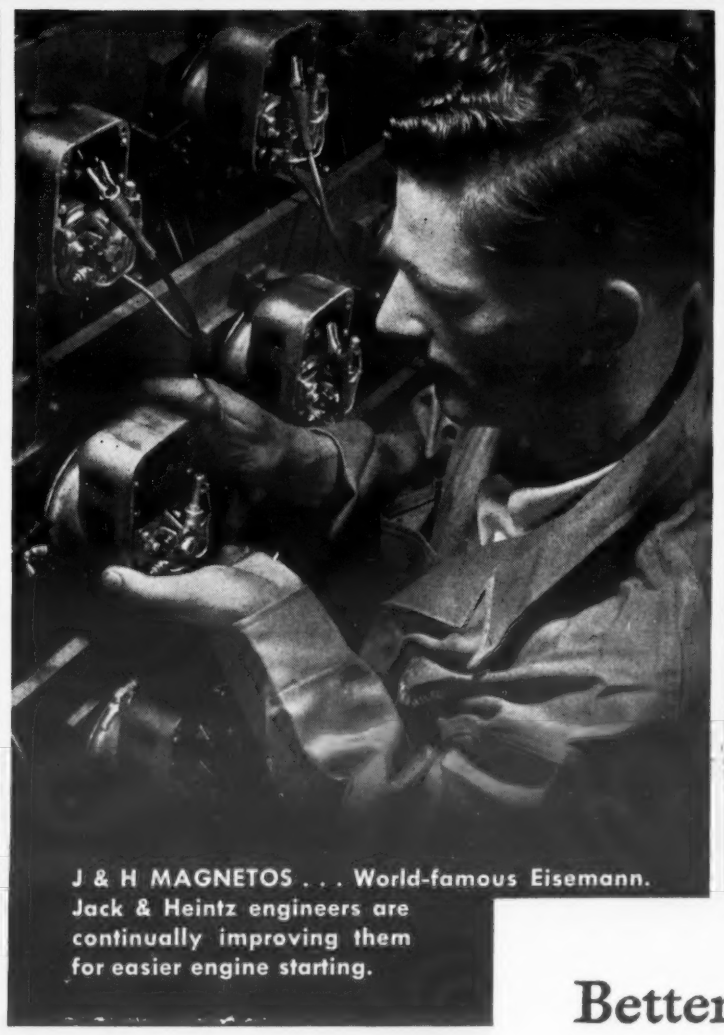
Here's to Quality!

J & H ELECTRIC MOTORS . . . Quiet, light-weight . . . more than a million have rolled off the lines of J & H during the past 22 months.

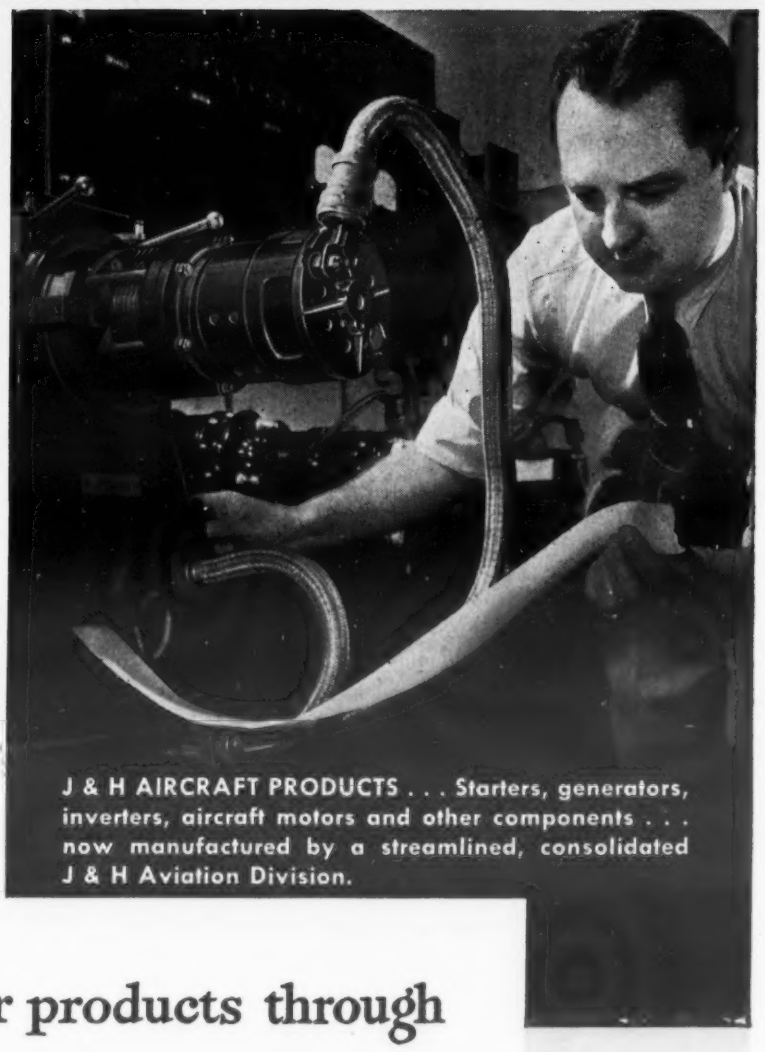
J & H CONDENSING UNITS . . . Exceptionally quiet and economical . . . improving the performance of milk coolers, freezers, ice cream cabinets and other refrigeration equipment.



J & H BALL BEARINGS . . . Made to new high standards of controlled precision . . . super-hard and tough . . . today are reducing friction and wear in automobiles, machinery and appliances.



J & H MAGNETOS . . . World-famous Eisemann. Jack & Heintz engineers are continually improving them for easier engine starting.



J & H AIRCRAFT PRODUCTS . . . Starters, generators, inverters, aircraft motors and other components . . . now manufactured by a streamlined, consolidated J & H Aviation Division.

Jack & Heintz products . . . *mass produced* with laboratory *precision* . . . are bringing to appliances, machines, tools and engines a new high standard of quiet, smooth dependable performance. Ask for these J & H products for outstanding *quality*.

Better products through

JACK & HEINTZ

Mass Precision

JACK & HEINTZ PRECISION INDUSTRIES, INC., *Cleveland 1, Ohio*

BIG LOADS COME EASY
WITH THIS
11-POINT EASLOAD
APPLIANCE
TRUCK
• EASY-GRIP CURVED HANDLES
• RUBBER COVERED UPRIGHTS AND CROSS BARS
• DOUBLE RATCHET STRAP CINCHER
• SMOOTH SURFACE SLIDES OVER STEPS—ON AND OFF DELIVERY TRUCKS
• ALL-WELDED TUBULAR STEEL FRAME
• QUICK RELEASE PEDAL LOCKS AND UNLOCKS LOADING OR UNLOADING POSITION
• 10 x 2.75 RUBBER TIRES
• RUBBER COVERED AXLE NUT
• WHEELS SLIDE BACKWARD TO CARRY THE LOAD
• RUBBER WHEELS ASSIST IN LOADING
• TOE PLATE COVERED WITH HEAVY CANVAS WEBBING

EASY does it with this new Easload Appliance Truck! The entire weight of the load rests on big 10-inch rubber tired roller balanced wheels. Wheels lock in forward position for sliding truck under appliance. Then they slide back in balanced position to carry the load when you kick the handy foot pedal. Double ratchet cinches two 12-foot straps. Curved tubular handle slides over steps. Rubber frame protectors. Rubber covered axle nuts.

The Easload comes complete with 12-foot heavy webbing strap at $48.50, f. o. b. Los Angeles. Capacity 800 lbs. Weight 64 lbs.

Immediate Delivery — Order Now

COLSON EQUIPMENT & SUPPLY CO.
1317 WILLOW STREET LOS ANGELES 13, CALIFORNIA

TELLING and SELLING

A GUIDE TO SMART ADVERTISING AND MERCHANDISING PRACTICES

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was for more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies. Out of his experience embracing all types of advertising and merchandising he brings his counsel to the small businessman who must plan his own advertising and promotional efforts.

By James D. Woolf

Plan Your Advertising

Recently I had a long and illuminating talk with the owner of a store dealing in stationery and office supplies. He came in to thank me for a suggestion I had made in one of my "Salesense" articles.

In this article I had advised "selective sharpshooting"—the use of letters aimed at specific persons who are logical prospects for what the merchant has to sell.

This man, acting on my idea, sent out 500 letters to individuals and firms, mostly non-customers of his, announcing the arrival of a new shipment of office furniture. The cost of the mailing (mimeographing and postage) was $9.50. The result in new business, from buyers never before in his store, added up during the following 10 days to $475.

"It's the first time," he said, "that I've had really good results from my advertising."

"Well," I said, "it was a lucky strike. Advertising usually doesn't work that fast."

Then I asked him about his advertising program. He admitted he had none—no fixed budget, no plan, no copy policy, no long-range objective.

Planlessly he had tried everything—newspapers, radio, signs on fence posts, handbills, circulars, movie slides—*for short periods.* Today he was jubilant about the letter; tomorrow he would be buying a float in a parade. The concept that "Keeping Everlastingly At It" in advertising wins success held no place in his thinking.

Planless advertising is folly. Many, many merchants are guilty of it. Even if a retailer has only a few hundred dollars to spend over a year, every dime of it should be invested with a clear understanding of objectives.

A sound advertising plan should give detailed consideration to these four main questions: 1) your market; 2) your budget; 3) your over-all strategy; 4) what you are going to say in your copy.

ANALYZING YOUR MARKET

Who are the most likely prospects for your merchandise? Are they largely factory or office workers, where do they live, when do they get their paychecks, and what are their shopping habits? What is the extent and character of your trading area, and does it reach out into the rural districts? If it does, what are the buying habits of your rural families and what advertising media is most likely to reach them?

Not long ago a dealer in builder's supplies, acting on the advice of an advertising counsellor, made a careful break-down of his sales during the previous six-month period. He found that 55% of his business came from rural areas as far out as 35

miles. All of his advertising money had been going into advertising in two local newspapers that, combined, covered only about 10% of the outside rural market.

This merchant is now spending about half of his appropriation for a campaign of friendly letters, sent out twice-monthly, to every rural family in his county. His total sales volume has increased almost 20% in three months.

HOW MUCH SHOULD YOU SPEND?

Your advertising budget should be based on a percentage of net sales. If your capital is slender, your safest course is to base your calculations on your previous year's sales; if your financial position is strong and you are eager for rapid growth, then work out an ambitious estimate of future sales and take a percentage of that for your advertising investment.

Generally speaking, retail advertising appropriations run from about one-half of one per cent to 5%. The average is about 3%. Some types of business—jewelry stores, for example—invest in advertising a higher per cent of sales than others.

If you are the proprietor of a very small retail store and are operating on a minimum amount of capital, a fraction of one per cent may be all you can afford to spend at the start.

YOUR ADVERTISING STRATEGY

After you have analyzed your market and determined your budget, you then have the problem of strategy. One of your first questions relates to *when* to spend your money.

If the sum you are working with is $6,000, should you spend $500 each month or twice as much in certain months as against others? You will be helped in this by a table on which is charted your previous years sales, month by month.

You will probably find that certain months are "slump months," and it may be that you can figure out a promotion plan justifying fairly heavy advertising expenditure in these months.

It is most important to take local conditions into full account. Find out what special events are being planned—county fairs, old home-weeks, holiday celebrations, harvest-time festivities, sporting events, paydays, etc.—and shape your advertising accordingly.

Examine the buying habits of your community in order to determine on what days advertising is likely to pay best. The type of merchandise you are advertising has a bearing on this question.

One of your most important considerations concerns media. You can't use them all—newspapers, local radio, billboards and posters, direct mail, etc.—and must make a choice. Your analysis of your market will help you find the answer. Much depends, too, on the type of merchandise you deal in.

For some types of articles—women's dresses and other such "eye-value" items—visual selling is usually indicated. I consider radio to

be a wonderfully effective medium, but it can never take the place of the profusely illustrated Sears and Ward catalogs.

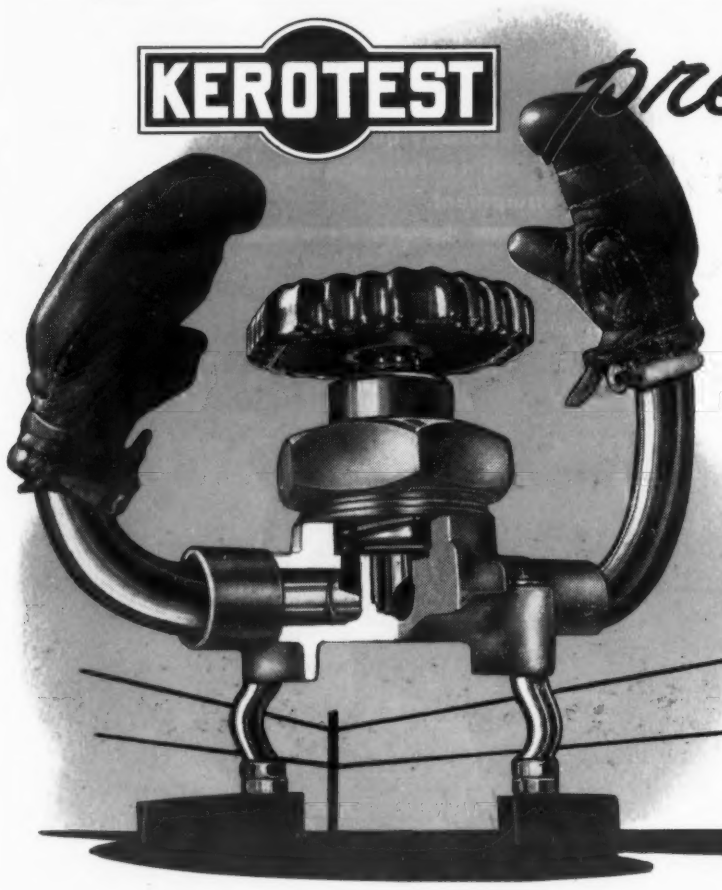
Without fail plan for frequency. Spasmodic, in-and-out advertising is rarely effective. Speaking generally, if I were a merchant and could afford in a year only 6,000 lines (approximately four full pages) of newspaper space, I would buy for myself one hundred 60-line ads, which would permit a selling message to my prospects twice each week.

YOUR ADVERTISING THEME

Your advertising theme—what you say in your copy to your hoped-for-customers—is a matter of such vast importance that I shall not attempt a detailed discussion in this present article. Much has been said in my previous installments in this publication, and much will be said in the future.

You are playing it safe when you talk about your merchandise—what it is, what it is made of, what it does, what it costs, why it is worth what it costs—and how it meets the needs, the problems and wants of the customer.

KEROTEST presents



"SHORTY"
INLINE

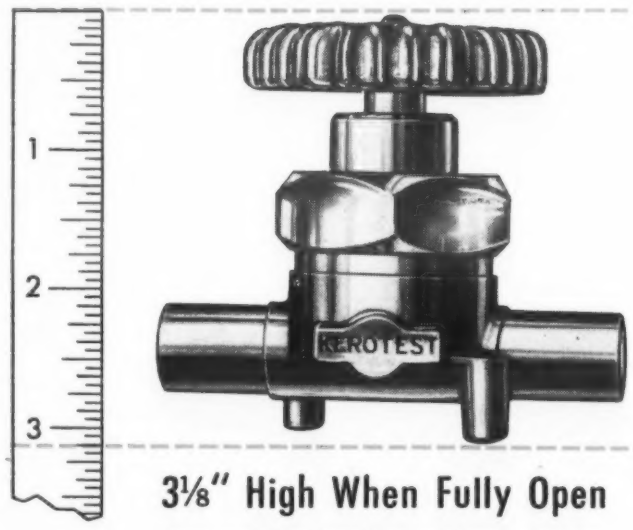
The Mighty Mite of all refrigerant valves!

KEROTEST leads in design!

Always first with the valve designs that solve your problems, KEROTEST leads again with "Shorty" the new refrigerant valve that installs in even the most cramped places.

Streamlined, with ports in line and mounting feet made integral with the valve body, the new Kerotest R24 requires only 3⅛" of height when full open . . . the "Mighty Mite" refrigerant valve of the industry!

KEROTEST's famous diaphragm packless construction is combined with high efficiency flow characteristics and rugged construction that assures you of top operating performance and life-long dependability.



3⅛" High When Fully Open

From mounting board to maximum stem extension only 3⅛" of height is required . . . the shortest diaphragm packless line valve on the market. It's a knockout in your clinches with tight places and a top performer for use in all your installations.

See your KEROTEST Wholesaler

KEROTEST MANUFACTURING CO.
PITTSBURGH 22, PA.

AMERICA'S FIRST NAME IN QUALITY VALVES

Immediate Delivery

REFRIGERATION Equipment & Supplies

180 ⅓ Universal Compressors With or Without Motors

187 Twelve Cubic Foot Evaporator Tanks

1837 Three Cubic Foot Evaporator Tanks

3200 Gallons ZERO-SEAL in 15 gal. Containers

45,750 lbs. Sub- ZERO-SEAL CYLINDER FORM
Covered With Pasteboard

ONLY OFFERS FROM BUYERS WILL BE CONSIDERED

No Brokers!

For additional information and complete details as to specifications and price, write to

D-12; P.O. Box 3552
Philadelphia 22, Pa.

DEPEND ON NORGE FOR THE BEST!

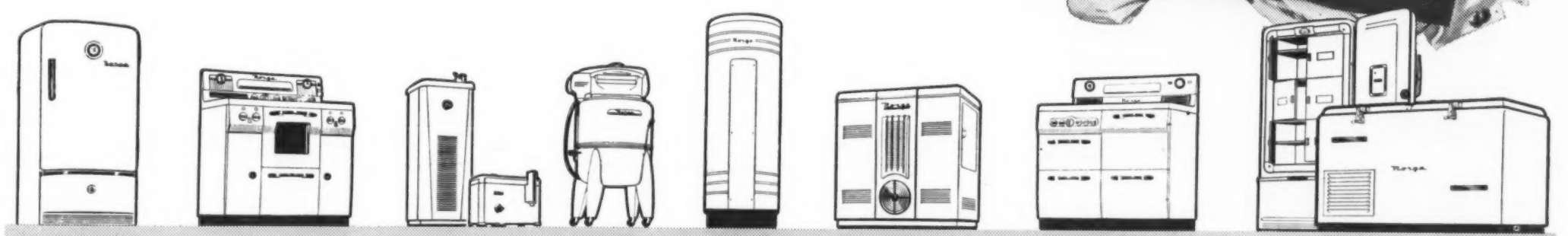
In Electric Ranges

MODEL E-457 Norge electric range is "styled to the minute" and provides all the latest advancements known to the science of electric cooking. Seven cooking speeds for surface units and deep-well cooker; automatic turn-on-and-turn-off operation of oven, deep-well cooker and appliance outlet; two-elements, one top and one bottom in the centrally placed oven; two locker-type utensil compartments.

MODEL E-427 Norge electric range has surface-cooking units clustered at left of the one-piece porcelain-enameled top. It features automatic control of the oven operation and the appliance outlet. It has the same contour-front styling as the De Luxe model. Seven cooking speeds for each of the surface units and deep-well cooker. The Model E-427 is priced moderately to attract a broad mid-range market.

Norge electric ranges, like all Norge products, are backed-up by aggressive national advertising in the country's leading magazines, such as Saturday Evening Post, Life, Ladies' Home Journal, McCall's, Woman's Home Companion, Good Housekeeping, Better Homes and Gardens, American Home, True Story, Household and others. Norge Division, Borg-Warner Corporation, Detroit 26, Michigan.

A BORG-WARNER INDUSTRY



A One Stop Appliance Store

When a customer drops into the K. & W. Plumbing, Heating, and Appliance store in Washington, D. C., that is as far as he need go. Here he finds that the same people will demonstrate either gas or electrical appliances to him, deliver and install them, make all necessary adjustments, and will provide guaranteed service on the appliances throughout their normal life.

That is what the Kay brothers call their all-in-one treatment.

Field Report

What are dealers, distributors, servicemen, and the others on the industry's front lines thinking about today? These "Field Reports"—extremely popular in prewar days—now give NEWS readers the latest ideas of the men closest to the all-important consumer.

All-In-One Service Offered Patrons by Dealer Who Can Install Everything

WASHINGTON, D. C.—The three Kays—Joseph, Albert J., and Evelyn—are expanding their appliance sales by offering more than the usual customer services.

The Kay brothers are co-owners of a Washington, D. C., appliance store featuring both electric and gas units which is the display and sales center of their operations. This branch of the business is managed and supervised by brother Joseph.

An equally important part of their business is the installation and service of gas appliances; and this is in charge of Albert who supervises the service crew and is responsible for the proper installation and servicing of all equipment sold by the K. & W. Plumbing, Heating, and Appliance Store.

The K. & W. store handles a complete line of gas and electric ranges, hot water heaters, refrigerators, automatic heating units, and conversion parts used to change types of heating. They are currently featuring a nationally advertised unit which has a three-way temperature control permitting ample water at the right heat for home heating, laundry, bath, and dishwashing.

The unusual customer service includes evening hours for customer convenience, free estimates on the cost of installations or conversions, advice on the best types or how to use various heating and cooking units, guaranteed satisfaction to all purchasers, and expert repairs at minimum cost.

Prior to opening their present shop at 644 H St., N.E., the two brothers were master plumbers operating their own plumbing shop. As plumbers, they were frequently called upon to install equipment, but always obtained their equipment from some jobber. Now with their own shop, and with sister Evelyn installed in the front office, they have progressed to the point where they employ a number of salesmen, at least one of whom is on the floor at all times, day and night.

In the Washington (D. C.) area, merchandising as a supplement to installation services is a fairly new field for the master plumbers; but in recent years this has been on the increase because it is a "natural" for them. Their experience has equipped them to accurately estimate the quality of merchandise and the amount of work for satisfactory installation.

When 19 master plumbers in the Washington area formed the "Merchandising Plumbers Corporation," the Kay brothers were among the first to participate. All members of this Corporation have stores of their own where advertised and other merchandise is on display.

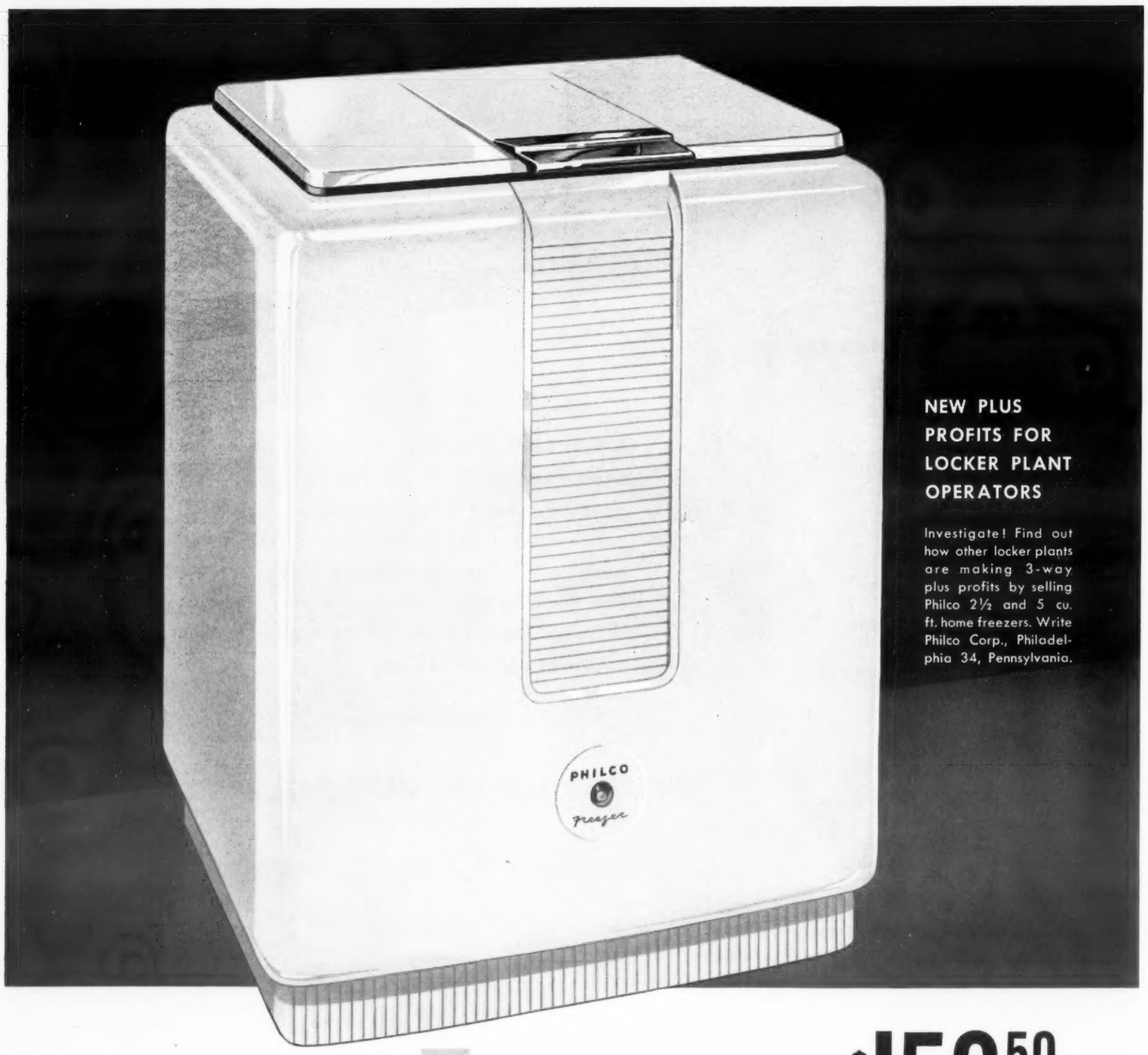
One of the most successful merchandising methods used by the Kay brothers, however, is a variation of the demonstration idea. One of their salesmen has a new piece of equipment installed in his own home, and then neighbors and prospects are shown the advantages of the product in actual use. The salesman and his family answer any questions, pass out advertising literature, and one of the brothers call on any prospect's home to provide free estimates or appraisals needed.

The window display is one of the chief sources of new prospects. Miss Evelyn, in charge of the display, provides the "woman's touch" that keeps the display shop a glistening white.

The biggest service which K. & W. supplies its customers—in the brothers belief—is the "all-in-one" arrangement. This makes it possible for a customer to deal with only one source when they need any service or appliance. They can come to the K. & W. store, see the product they desire, witness a demonstration of it in actual use, arrange for the purchase and installation, call the same firm for any necessary adjustments or repairs, and be guaranteed that the appliance will have thorough up-keep during its normal life.

New Branch Managers Named by Puro Filter

NEW YORK CITY — The Puro Filter Corp. of America has announced the appointments of Donald A. Trathen as branch manager of its Detroit office and of Charles A. Kraft as sales manager for its St. Louis branch. Puro manufactures electric water coolers and filters.


NEW PLUS
PROFITS FOR
LOCKER PLANT
OPERATORS
Investigate! Find out how other locker plants are making 3-way plus profits by selling Philco 2½ and 5 cu. ft. home freezers. Write Philco Corp., Philadelphia 34, Pennsylvania.
PHILCO
freezer

GREAT NEW PHILCO FREEZER VALUE!

a sensation at $159.50 * in Zone 1

IT'S THE NEW PHILCO AH-24...2½ CU. FT.

The biggest market ever available to any home freezer—is now waiting for this new Philco AH-24. Yes, at this sensationally low price, many new families will want a home freezer—will be added to your circle of regular customers for packaged foods and processing services—will be developed into rental customers. The Philco AH-24 is, in fact, the key to tremendously increased sales and profits for locker plants everywhere. Investigate . . . write for complete facts, today!

PHILCO *Famous for Quality the World Over*

COMMERCIAL CABINETS

Contract Manufacturing

Experienced, well rated, quality refrigeration cabinet manufacturer wants contracts for private brand commercial refrigerators.

Prefer steady production runs but will consider short runs.

Have experienced refrigeration engineering, design, and styling personnel. Make own tools and dies.

Location—East Coast.

BOX NUMBER 2731
AIR CONDITIONING & REFRIGERATION NEWS

Guillory Will Head New Weber Southern Region Sales Office

LOS ANGELES—H. M. Brundage, vice president in charge of sales of the Weber Showcase & Fixture Co., announces the establishment of a southern regional sales office at New Orleans, the address being 107 Camp St.

This is the second of the four regional sales offices to be established in the new national sales set-up now in effect. The first was Chicago.

E. Jack Guillory, formerly head of the International Trading Co., has been appointed regional manager, in charge of Weber's entire southern sales region.

Guillory has had a varied selling career since his graduation from Tulane university. His experience includes five years as a salesman with the Edison company, and several years as territory representative and sales manager of Walther Bros. Co., refrigeration and appliance distributor.

From Walther Bros. he went to Atwater Kent Mfg. Co. as a district representative and later division manager. When Atwater Kent went out of business he went to work for Philco Corp. as district representative in the same area and was promoted to division manager.

Guillory became known in other territories as a result of writing two books on salesmanship which enjoyed a wide following. In 1944 he resigned from Philco to organize the International Trading Co.

As headquarters city for the entire southern sales region, the New Orleans office will be a virtual "home office" for all Weber activities in that territory. A complete showroom will be maintained and warehouse facilities provided where a complete line of Weber soda fountains and commercial refrigeration products will be stored for speedy distribution.

The office will be completely staffed for store planning, market analysis, and sales and service to dealers.

Costs Postpone Plans To Air Cool Public Places In Nebraska

OMAHA, Neb. — High costs are said to be responsible for postponement of at least two major refrigeration installations in Nebraska.

The City Auditorium Commission of Omaha has begun studying the possibility of eliminating some features of the proposed new auditorium to cut costs, and elimination of air conditioning and the ice rink has been suggested. Rather than delay construction of the auditorium indefinitely, it is proposed to build the building so that air conditioning, the ice rink, and other features could be added later.

At Lincoln, the bond issue approved by voters before the war for a new city auditorium, to include an ice rink and air conditioning, is not sufficient to build at prevailing post-war prices, so the project has been indefinitely postponed.

ASHVE Plans Comprehensive Study Of Panel Heating and Cooling Control

NEW YORK CITY—A comprehensive investigation on the Control of Panel Heating and Cooling Systems has been approved by the American Society of Heating and Ventilating Engineers Committee on Research, at its meeting in New York according to an announcement made by Chairman L. N. Hunter.

He stated that this action of the committee activates the third phase of the over-all research program on Panel Heating and Cooling, under the direction of G. D. Winans, Detroit Research Technical Committee chairman.

The committee has previously approved projects involving heat transfer within and behind the panel and heat transfer between the panel surface and the space.

The complexity of the approved studies on Panel Heating and Cooling has demanded great care in planning. The many factors affecting this type of heat transfer have been given serious consideration. Every effort has been made to maintain control over these factors so that the effect of each may be determined with a reasonable degree of accuracy. Without this care the resulting engineering data would be open to question.

This action by the Committee on Research is the result of recommendations made by Group D of the Technical Advisory Committee on Panel Heating and Cooling at its last meeting in Chicago. J. S. Locke, Chairman of Group D, stated that the objective of his group was "to determine what controls are necessary for comfort regulation of panel heating and cooling systems."

To this end recommendations made by Group D include field surveys and tests in various types of buildings, with analytical investigations.

Tutt Directs Carrier Unit Sales In Dallas

DALLAS, Tex. — J. A. Gazelle, dealer sales manager for Carrier Corp., has announced the appointment of Duncan J. Tutt as zone merchandising manager for the Dallas district. Tutt will be responsible for the merchandising of Carrier packaged items.

Duncan J. Tutt

He comes to Carrier with a broad background in the merchandising field, being formerly regional sales manager for Eureka Williams Co., and prior to that superintendent of appliance sales for Higgins Industries.

Tutt spent four years in the Army Air Forces and until the date of his entering the service, was a manufacturers' agent in 12 southern states.

Just plug in - and use "Character"
THE WORLD'S SMARTEST
Self-Contained Florist Display Refrigerators

- Unitized
- Stainless Steel Front
- Large, Display Glass Sliding Doors
- Fluorescent Lighting
- Genuine Cemetric Tile Floor
- Black Panelyte and Stainless Steel Trim
- Stepped-Up Display Stands

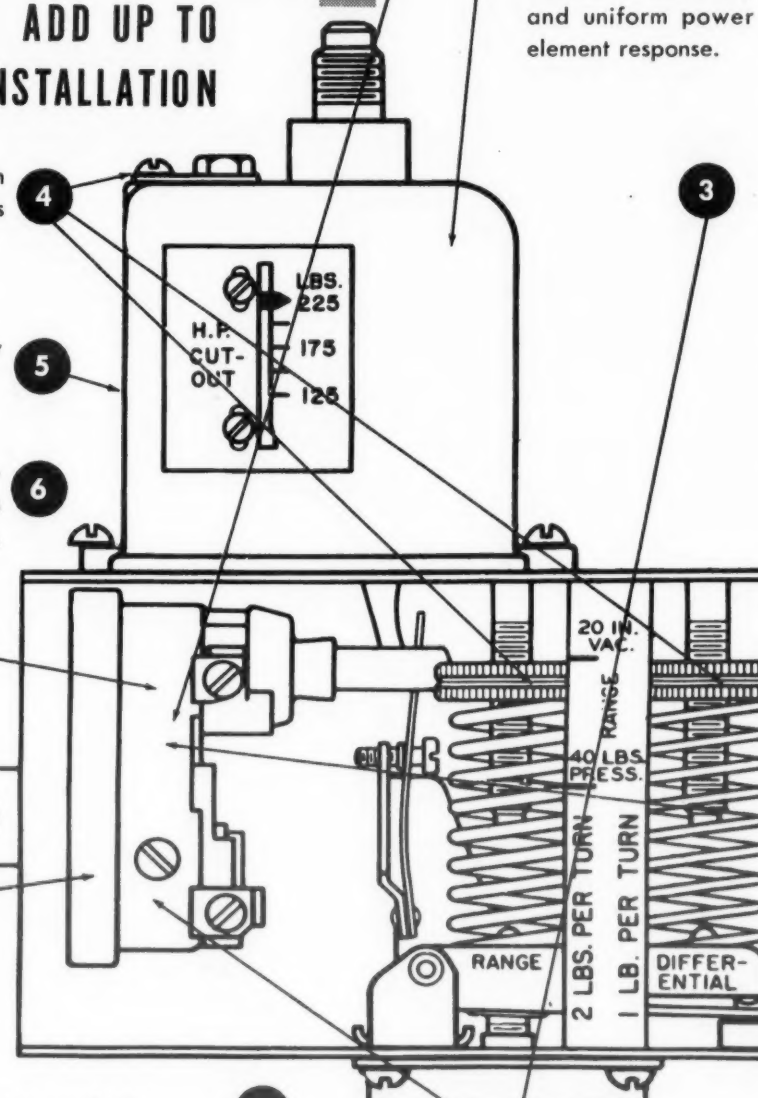
No. 630 Junior S/C
Size 72" x 34" x 86"
Write or call for our latest literature
"Character" REFRIGERATORS Corp.
Formerly A. & S. Refrigerator Co.
645 BROADWAY — NEW YORK 12, N. Y.
Tel: GRamercy 7-3590

WATER REGULATING VALVES
TYPE WP
Electrimatic Water Regulating Valves are now available in sizes ranging from 3/8 to 4-in. connections.
Precision engineered, individually inspected and tested.
Ask Your Wholesaler For Full Details
Electrimatic
2100 INDIANA AVE. CHICAGO 45, ILL.
CANADA—2025 ADDINGTON AVE., MONTREAL

LET'S ANALYZE Quality
"DETROIT" NO. 450 CONTROLS
MODEL FIBA DUAL PRESSURE CONTROL ILLUSTRATED
RANGES { Low Side—20" vac. to 40 lbs. / High Side—125 lbs. to 225 lbs.

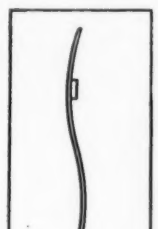
These ADD UP TO FLEXIBILITY OF INSTALLATION

Range, Differential, and High Pressure Cut-out adjustments readily accessible. (4)
High Pressure Cut-out easily replaceable in the field. (5)
Inside and Outside Differential and Range adjustments available in various models. (6)
Snap Switch a complete sub-assembly —removable by loosening a single screw. (7)
AC or DC switches interchangeable and replaceable in the field. (8)
Constant Cut-in or Cut-out models available. (9)
Available with pressure or temperature responsive elements. (10)
Pressure and temperature responsive elements replaceable in respective models. (11)



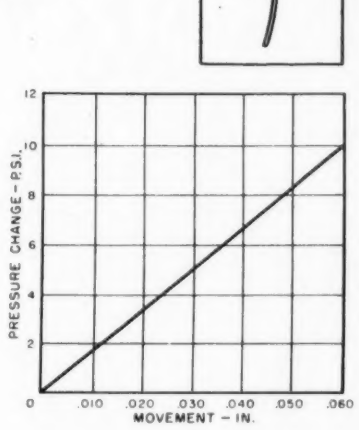
These ADD UP TO PERFECT REFRIGERANT CONTROL

1 Buckling spring snap switch for constancy of setting.



2 High Pressure Cut-out for motor and system protection.

Bellows for flexibility and uniform power element response.



These ADD UP TO CUSTOMER PROTECTION

12 Silver Contacts for long life and dependability.
13 Reinforced All Metal Case.
14 Duraflex Bellows.
15 Vermin, insect and moisture proof switch.

2862

DETROIT LUBRICATOR COMPANY
"DETROIT"
General Offices: 5900 TRUMBULL AVENUE, DETROIT 8, MICHIGAN
Division of American Radiator & Standard Sanitary corporation
Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG
"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

Further Development of Radarange May Keep It Off Market 3-5 Years

WALTHAM, Mass.—Although Raytheon Mfg. Co.'s Radarange is now being used by a number of hotels and restaurants on a lease basis, it is not yet fully perfected and will not be put on the market until it is, Charles F. Adams, Jr., president, reported recently.

Adams said general use of Radarange and several other electronic products developed by Raytheon is perhaps three to five years away. Radarange is the much-publicized high frequency powered range that cooks food in a matter of seconds by molecular friction within the food itself.

The industry is not as yet geared to turn out electronic products at the rate expected by the public, Adams explained. He pointed out that the personnel of his company was trained in wartime practices for the most part and that it is still in the process of readjusting to peacetime operation.

Raytheon's annual volume from radio and television equipment, radar, and air filters is now about $50,000,000, Adams said. But until the readjustment to normal operation is completed, he added, the company will not earn the profits to be expected from such a volume.

Crosley Distributors Gather In Cincinnati March 22-24

CINCINNATI—Representatives of the distributor organization of The Crosley Division, Avco Mfg. Corp. from all parts of the U. S. will gather in Cincinnati this month for a three-day series of sales conferences.

N. C. Macdonald, general sales manager, will welcome the Crosley distributors to the sessions, commencing on March 22 and continuing through March 24.

Corley W. Kirby, Crosley domestic sales manager, will be in charge of the conference sessions, which will be addressed by Crosley sales, engineering advertising, and merchandising executives at the Taft Auditorium.

Cobb, Ex-REA Official, To Help Frigidaire Push Sales In Rural Market

DAYTON—James R. Cobb has resigned his REA post in Washington, D. C., as Assistant Chief of Applications & Loans division to join Frigidaire Division of General Motors as manager of Farm Market Sales, a new post created in the Appliance Sales Department, reports H. M. Kelley, appliance sales manager.

James R. Cobb

Kelley explained that the new farm sales section is being organized in line with the current company planning, which places "more and more emphasis on the rapidly-growing farm market." Cobb will work out of the Special Markets division, headed by C. E. Quigley.

Cobb has been in charge of the REA Power Use program for the past three years. Prior to this he had full responsibility for valuation studies concerning the acquisition of electric utility property by REA borrowers on a nation-wide scale for three years. He first became associated with the REA staff in 1937 as a utilization representative in the southeastern and southwestern sections of the country, conducting dealer-consumer appliance and farm equipment programs.

Bandoli-McIntyre Will Handle Presteline In So. California

CHICAGO—Appointment of Bandoli-McIntyre Co., Los Angeles, as distributor of Presteline major appliances in southern California was announced recently by A. Raysson, general sales manager for the domestic appliance division of Pressed Steel Car Co., Inc. here.

Marvin S. Bandoli, president of the distributorship, announced that the firm had discontinued 15 of its lines to concentrate on Presteline electric ranges and water heaters. It will also concentrate on five other major appliance lines.

Charity Angle Gives Dealer Free and Easy Selling Method

NEW YORK CITY—Charity might begin at home, but it doesn't have to stay there. At least one store here is using that angle to sell appliances.

Through an advertisement appearin the *New York Times* recently, Lewis & Conger promised that out of any purchase made during March 10% would go to the charity designated by the customer.

"REMEMBER—MARCH IS 'NAME YOUR OWN CHARITY' MONTH AT LEWIS & CONGER," read the headline over the advertisement.

"Your favorite charity can have 10% of whatever you spend here this month," the text continued, "if you'll just name your organization when you order. You do no extra work—you pay not a penny extra—but your charity *does* get the extra money!"

Here is how the system works:

For example, a patron buys an electric broiler, priced at $22.95. Then he specifies which charity he would like to see receive a gift of funds. Shortly thereafter the organization indicated would be sent a check from Lewis & Conger in the amount of $2.30.

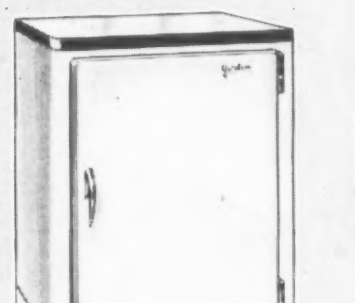
Sunbeam Starts New Plant To Match Heavy Demand

CHICAGO—With demand for all of its appliances still exceeding supply and 1948 sales outstripping those of the comparable period last year, Sunbeam Corp. has begun construction of a $2,500,000 plant here to provide 30% more factory floor space, B. A. Graham, president, reported at the annual meeting.

Electric irons and automatic toasters will be the principal products manufactured in the new plant. It is expected to be completed by the end of the year.

Exact sales figures for January and the part of February covered by his report were not revealed by Graham.

★ 3½ Cu. Ft. Capacity
★ Fits anywhere—only 34½" high
★ Porcelain Work Table Top Dulux Front and Sides
★ Porcelain Interior
★ Quiet, sealed unit
★ THREE MODELS—
1. Normal Temperature
2. Freezer
3. All Ice-Cube Maker
★ Interior Light
★ Fits anywhere—wanted everywhere!



ICE-MAKER MODEL
All low temperature.
Capacity — 20 trays.

IMMEDIATE DELIVERY FOR VOLUME SELLING

Here is a new JORDON model that hits the sales jackpot! The JORDONETTE is made to order for the thousands of homes that are looking for a small, compact "second" refrigerator—and it fills the bill for apartments, small homes with kitchenettes, professional offices, trailers, field offices, laboratories, shops, etc., etc. Prospects all around you! We have put the complete and greatly enlarged JORDON facilities solidly in back of the JORDONETTE and can give you IMMEDIATE DELIVERY on ALL models. In other words, you can start to make profits right NOW.

So before you turn this page—

Write—Wire—or Phone for Details

The JORDON 1948 Line Includes: REACH-INS IN A WIDE VARIETY • FROZEN FOOD MERCHANDISERS AND STORAGE CASES • FULL VISION CASES • WALL DISPLAY CASES HOME AND FARM FREEZERS BEVERAGE COOLERS AND ALL PURPOSE REFRIGERATORS DISPLAY CASES

WRITE FOR 1948 CATALOG

Jordon
AMERICA'S MODERN COMPLETE LINE
JORDON REFRIGERATOR CO.
Sales Division
58th & Grays Ave., Philadelphia 43, PENNA.
CABLE: "JORDONREF" BElgrade 6-4510
PLANT: PHILA., PA.

1'ST IN LINE AT THIRST TIME!

OASIS — made by the world's largest maker of electric drinking water coolers—is *first in line* when it comes to delivering complete thirst relief at low cost. Write for details.

The EBCO Manufacturing Co.
401 W. Town St., Cols. 8, Ohio

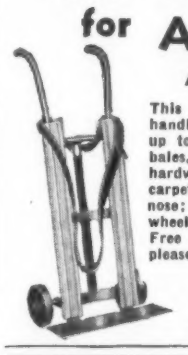
OASIS
ELECTRIC WATER COOLERS

AIR CONDITIONING SALES ENGINEER WANTED

Growing concern with wide sales contact in Chicago area desires Sales Engineer capable of assuming complete charge of sales and layout of large air conditioning units. Right man can look forward to taking over as Sales Manager as business warrants it.

Here is a real opportunity for an energetic salesman who can deliver. Write complete background information to Box 2716, Air Conditioning & Refrigeration News.

New Padded Truck for APPLIANCES AND FURNITURE



This convenient truck will easily handle all appliances and furniture up to 800 lbs. Also handles crates, bales, barrels. Two flat surfaces hardwood covered with thick pad of carpet. Tube steel, 54" ht.; 24" nose; 13' web strap. 8 x 2 rubber wheels. Price $31.95. Model 80. Free trial. Return collect if not pleased. Immediate delivery.

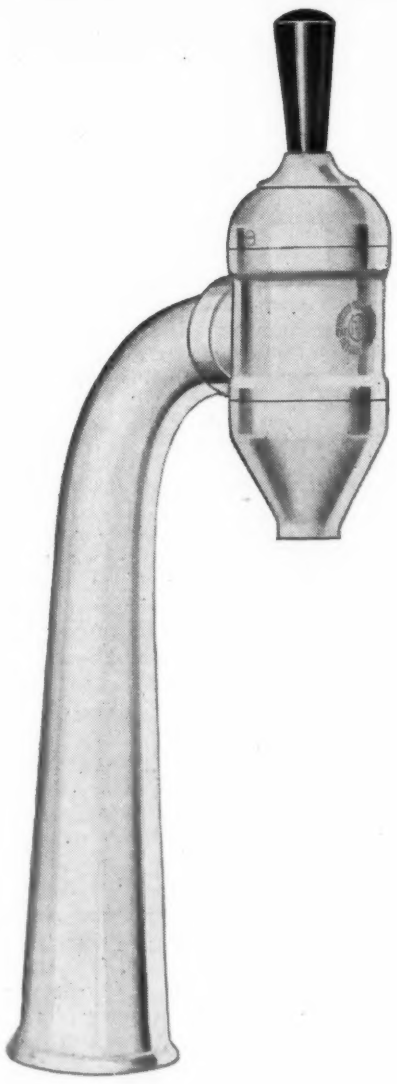
HANDEES CO.
Dept. AC-1
Bloomington, Illinois

VISE-GRIP PINCH-OFF PLIERS $1.95

Ask for them at your Favorite Wholesalers

NATIONAL DISTRIBUTOR
REFRIGERATION SERVICE INC., LOS ANGELES

that's Winning More Sales!



Hudson's Soft Drink Dispenser and Constant Pressure Carbonator really have it on the ball with the kind of Sales Punch that makes fountain and bar owners' eyes pop. Starts them seeing visions of greater fountain volume, faster service, and the kind of fountain profits they often dream about. Want to boost your own earnings into the champions' class? Then, get into the Hudson Corner now, and start knocking sales resistance and competition for a loop with these two sensational Hudson Products.

1 *Hudson* SOFT DRINK DISPENSER

The only drink dispensing device that serves two complete carbonated soft drinks (cola, gingerale and other syrup drinks) automatically mixed and correctly proportioned with syrup and soda, ice cold, and ready to serve—*plus* sparkling soda—by simply pulling a single lever.

4 WAYS FOR FOUNTAINS: The Hudson Dispenser draws two complete, ice cold, syrup and soda soft drinks, ready to serve (pull the lever left or right) *plus* soda at lo-pressure (pull lever forward) and a hi-pressure jet of zippy soda (press lever backwards) for carbonating ice cream sodas. For installation at fountains, the Hudson Dispenser is equipped with a matching chrome plated gooseneck extension.

3 WAYS FOR BARS: The Hudson Dispenser serves the three most popular chasers—soda, cola and gingerale, ice cold, sparkling, delicious and ready to serve. There's no bottles, no cases, no wasted space. No extra motions, no time lost. Every drink is clear and fresh with positively no intermixing of flavors.

The Hudson Soft Drink Dispenser is mechanically perfect, tested in hundreds of fountains and bars. Installation is simple and quick to make. Install the Hudson Dispenser in fountain or bar, connect two 3 gallon stainless steel syrup tanks into system, and the Hudson Dispenser is ready to operate.

2 *Hudson* Constant Pressure CARBONATOR

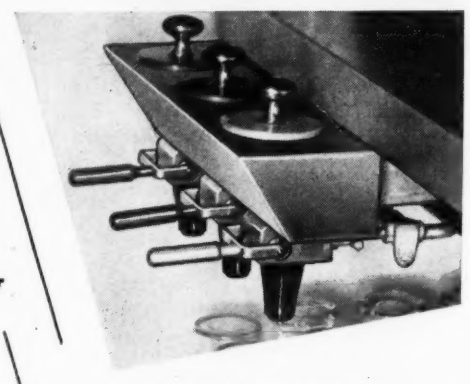
In 1947, The Hudson Constant Pressure Carbonator was a sensational new invention. Today, there are more than 20,000 units in daily operation, and it is accepted as the only modern equipment for making carbonated water. The Hudson Carbonator delivers a minimum of 25 gallons of sparkling soda per hour at constant pressure up to 125 pounds at the draft arm. It uses no electricity, has no motor, no pump, no gears, belts or other moving parts to wear and service—no soda coils to clean and purge. The Hudson Carbonator is small (3¾ x 16¾ x 9¾) lightweight (only 17 lbs.) and easily installed in any cooling system. Make three simple connections—fresh water and CO_2 gas inlets, carbonated water outlet to the draft arm, and the Hudson Constant Pressure Carbonator is ready to operate, automatically delivering more than enough ice cold, zippy soda than bars and fountains need in their busiest hours.

Write now for further information about the Hudson Soft Drink Dispenser and the Hudson Constant Pressure Carbonator . . . and complete details on the Hudson Dealer Plan.

HUDSON PRODUCTS CO., INC. 4400 ST. AUBIN AVE. DETROIT, MICH.

DEALERS and DISTRIBUTORS! every bar and tavern is a prospect for the

MULTI-FLOW *Soda Dispenser*



Flip Down the Handle
a finished mixed chaser
Flip Up the Handle
sparkling seltzer

The new MULTI-FLOW delivers perfectly mixed chasers every time. Flip the handle up for sparkling seltzer . . . down for ginger ale, lemon-up or cola —with proportions of syrup and soda water automatically controlled, no matter what the size of the drink. No costly and time-wasting handling of bottled drinks and empties; saves space because there are no large syrup tanks.

CHECK THESE SELLING POINTS:

1. *Compact—fits under any bar*
2. *All 18-8 stainless steel construction*
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INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

dollars and hours of time each day. He can make the farmer's work lighter, and he can show him how to command premium prices for his produce.

Larry doesn't just talk-talk about this. He sets down table after table of statistics, testimonial after testimonial from satisfied users, and fact after fact to back up every claim he makes. And he does it all in an absorbing, highly readable style.

What rewards will accrue to the salesman for his efforts in this promising and comparatively virgin field are left pretty much up to the abilities of the salesman himself.

What benefits the farmer and his family are going to realize from the appliances they buy is Wray's chief concern.

As the author explains in his introduction: "We of the electrical industry are inclined to take very much for granted this mysterious source of energy that we generate, distribute, and sell. We think of it in terms of kilowatts and capacity and load, as the grocer thinks in pounds and quarts and barrels of the commodities he deals in.

"We too are selling a commodity, susceptible of measurement; but we are also selling a way of life, a new standard of living, and for the millions of families living on farms and in small towns throughout the country, we are bringing a release from the backbreaking burdens of our grandparents.

"It is this demonstrated quality of the product we sell, its capacity to perform everyday tasks tirelessly, efficiently, quickly, safely, and cheaply, that we need to bear uppermost in mind and impart to our constantly growing army of customers."

Wray opens his work with a description of the rural and small town market, and then points out the importance of electrification to the farm family. Next, he discusses in detail the electrical appliances the farmer can use profitably.

He covers the electric water system, water heater, range, refrigerator, home freezer, home laundry, cleaning equipment, and farm work equipment. He works out in dollars and cents, in hours per day or month or year, and in production results the difference it makes to the farmer whether electricity or some other source of power does his chores for him.

Electricity, Wray proves, is the best hired man the farmer ever had.

Incidentally, he devotes two pregnant chapters to the competition—bottled gas and coal. He warns electrical salesmen that they must be super-sharp to get ahead of the bottled gas boys in many territories.

He advises strongly against neglecting these areas and urges the rural salesman to propagate the story of electricity's superiority over other sources of power in these territories so that when the power line does come, they will be prime prospects for his products.

Wray rounds out his book with a chapter containing basic data on adequate wiring. After all, he notes, all rural sales of electrical equipment are based on the ability of the farm's wiring system to support them.

A few selected quotations from Wray's work will illustrate the author's easy to read, punchy, factual style.

On the extent of the rural market that awaits the appliance salesman, he states:

"The present rate of expansion of the rural market for electrical appliances and farm work equipment dwarfs anything previously known in the industry. Never before, perhaps, have such opportunities confronted the salesman; for (1) the millions of new customers added to the electric power lines since the war are waiting only to be *sold* on the ways and means of utilizing electricity fully to realize its benefits, and (2) additional millions of new customers are being added at a yearly rate far in excess of any previous time."

He goes on: "When you realize that, as of 1940, only 17.8% of the country's 6,000,000 farms had running water piped into the dwelling (and of these a good many used windmills); that 88% of the farms had no bathtubs or showers installed; that 79% still used outside toilet facilities and only 11% had flush toilets; and that 65.7% still used kerosene for lighting purposes, you know the magnitude of the selling job that lies ahead."

For a typical example of his logical, hit-him-in-the-pocketbook approach to the farmer, take this:

"Even the most hardheaded farmer, the most rugged of conservatives, cannot long overlook the weight of evidence on laborsaving and production increases that power lines bring in their wake.

"If he realizes, for instance, that when he is hard at work he has an hourly personal power output of 1/10 of 1 hp., he will have a new understanding of electric power.

"He will be delivering only as much work in a day as a 1-hp. motor does in a single hour; the consumption of electricity is less than a kw-hr at an average cost of four cents. Thus, he is actually working at the rate of four cents for a 10-hour day.

"Or, if he chose to buy manpower labor, he would pay $4 and up a day for work that the motor does in an hour for four cents."

Because farm work equipment will more obviously save the farmer both money and labor, Wray believes that this type of equipment should be sold first. He adds, "The salesman who is on his toes will realize that, in promoting the sale of work equipment he is laying a firm basis for the sale of other equipment. For, once the time and labor saving aspects of electrification had been proved conclusively to the farmer, he will be more receptive toward other applications."

If there is any angle to selling in the rural and small town market that Wray hasn't covered in his excellent handbook, we haven't heard about it.

New Definitions

Past confusion in meanings of marketing terms are now being cleared up by experts in business training. Prepared by the American Marketing Association, a report containing a new American glossary of technical words soon will be ready for publication.

One aim of the committee was the elimination of "a lot of fifty-dollar words" in old definitions, and use of simple language in the new ones. Typical of confusion surrounding terms in common usage are the numerous interpretations of "merchandising." The committee's report offers this interesting description:

"MERCHANDISING: The planning to offer the right merchandise at the right place, at the right time, in the right quantities, and at the right price."

"This contrasts with the old definition: 'The adjustment of merchandise produced or offered for sale to customer demand. It involves the coordination of selling with production or buying for resale.'

"Many of the new definitions cover clearer, sharper thought on such basic terms as 'market,' 'marketing function,' and 'marketing research.' On the term 'marketing' itself the committee recommends discontinuance of its use as a synonym for 'distribution.'"

Concerning the complex and sometimes esoteric terminology surrounding the various phases of "research" the committee's report asserts:

"Marketing research is the inclusive term which embraces all research activities carried on in connection with the management of marketing work. It includes various subsidiary types of research such as Market Research; Sales Research, which is largely an analysis of the sales records of a company; Consumer Research, which is concerned chiefly with the discovery and analysis of consumer attitudes, reactions, and preferences, and Advertising Research, which is carried on chiefly as an aid to the management of advertising work.

"Marketing research," the report continues, is "the gathering, recording, and analysis of all facts about problems relating to marketing, or the transfer and sales of goods and services from producer to consumer." Market research, it adds, is "a field of marketing research, which includes the means and methods of measuring the extent of a market and determining its characteristics."

Other quotes from this forthcoming report:

"The Manufacturer's agent has often been described as a species of broker. In the majority of cases this seems to be substantially accurate. It is probably more accurate to regard him as a special variety of agent middleman.

"The essence of the middleman's operation lies in the fact that he plays an active and prominent part in the negotiations leading up to transactions of purchase and sale. This is what distinguishes him from a marketing facilitating agent. . . ."

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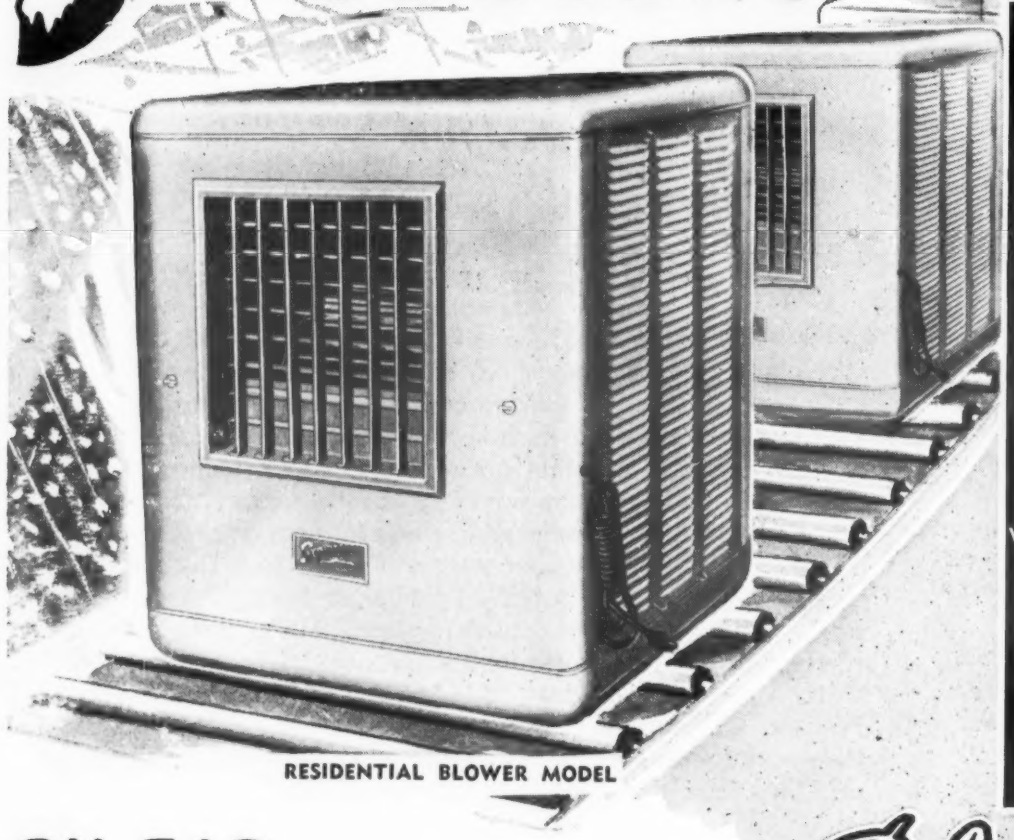

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Childrens Hospital To Get Latest Air Conditioning, Refrigeration Innovations

OMAHA, Neb.—Latest innovations in air conditioning and refrigeration are planned for in the Childrens Memorial Hospital which has just been opened here, although the ducts which have been installed for zoned air conditioning throughout the entire million-dollar structure will not be placed in use until additional funds have been contributed to purchase the refrigeration and humidification equipment.

Salient features of the new hospital include an air conditioned operating suite (already equipped with its own refrigeration system) with a separate system removing the exhausted air; air in the kitchen is separately controlled, and is exhausted through vents that lead to the roof, which means that no odor can penetrate into any other part of the hospital; and the garbage is frozen so that insects and rodents are not attracted.

In normal summer temperatures, the frozen garbage may remain outdoors one-half to three-fourths of an hour before it thaws enough to draw flies, according to Frank Latenser & Sons, architects for the building.

The north end of the lower floor contains a huge kitchen in which have been built three huge walk-in ice boxes. One is exclusively for vegetables, the second for meats, and the third for dairy products. A number of commercial-size refrigerators also have been installed in the kitchen, along with special refrigerators for biologicals, etc., in the laboratories and pharmaceutical room. The garbage freeze room is near the kitchen.

Other special features include electric light switches that don't click or make a sound, sound-proofing of all rooms, controlled lighting in patients' rooms and arrangement so that the sun will shine into every child's room at some time during the day, and arrangement of mirrors so that the nurses can see "through the walls." Ceilings in rooms and halls are acoustically treated. Floors are laid with asphalt tile to absorb sound.

It Works In Wyoming

Market's Self-Service Layout Guides Shoppers to Meat, Produce Depts. First

CASPER, Wyo. — Re-arrangement of store fixtures so that customers see the refrigerated products first, including meats, produce, and dairy products, has increased sales for Sandison's Tip Top Food Market, 345 East Second St., according to Proprietors James M. and Tommy Sandison. The store also has boosted volume by selling fresh-frozen horsemeat, a locally processed product, for animal food, at 39 cents for a two-pound package.

The Sandisons reported that the new, open self-service coolers for vegetables and dairy products have increased the volume of sales as well as reducing spoilage materially. They are planning to inaugurate self-service meat selling, using pre-packaged meats, when suitable new fixtures are available for the purpose.

Shoppers at the market save time as a result of the store traffic arrangement wherein they are guided first to meats and produce. Once the shoppers get their fresh items purchased, they can relax for the rest of their shopping tour and are inclined to browse around and buy more merchandise, say the owners.

Under the present effective arrangement, the shopper finds herself in the fruits and vegetables section immediately after she has secured her pushcart. The latter have seats attached for small children.

From fruits and vegetables the shopper is guided by the layout to the frozen foods and meat departments. If she finds the meat department with a large waiting line, she can by-pass it and work on the remainder of her shopping list, cutting back to the meat department whenever she sees the line thin out.

Dayton Firm To License Concentrating Process For Liquid Solutions

DAYTON, Ohio—A high-efficiency method for concentrating liquid solutions of less-than-eutectic mixture is being readied for widespread application by The Commonwealth Engineering Co., Dayton, Ohio.

The patented process involves only three steps. The solution to be concentrated is completely frozen, and the ice is finely divided. Application of pressure to the crystal mass releases the concentrate in liquid form, leaving virtually all water as ice.

In fruit juice processing, all vitamins and minerals are contained in the liquid extract. The simple addition of water restores the concentrate to its original state, with flavor intact. Juice concentrates have a sugar content of 60% or more, and so are self-preserving indefinitely without additives of any kind.

The new "dehydrating" method extends to other fields, as well. Chemical and pharmaceutical processing, the handling of blood plasma, and various industrial activities are expected to benefit.

Complete designs for low-cost plants are being readied by Commonwealth Engineering.

Fedders-Quigan Earnings, Sales Nearly Double In '47

BUFFALO—Fedders-Quigan Corp. reports that both sales and net earnings almost doubled in 1947. Sales rose to $20,121,814 from $11,642,935 in 1946 and net profit rose to $1,717,667, equal, after charges and Federal income taxes, to $1.43 a share. In 1946 earnings were $902,510, or 75 cents a share.

Net profit for the last quarter of 1947 totaled $631,117, or 53 cents a share, compared with $367,039, or 30 cents a share, in the same quarter in 1946.

The company said inventories during 1947 declined to $2,680,225 from $2,755,292 in 1946. Current assets in 1947 rose to $6,083,294 from $4,795,447 in 1946. Current liabilities declined to $2,114,197 from $3,141,805.

factory representative

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If you were to write the ticket for the kind of company you'd like to have to back up your selling effort and fill the needs of your customers, we doubt that you could approach the set-up this company offers.

Our client gives you everything with which to build a highly profitable business, product, engineering and service. They're smart, aggressive and going places. They're a fine group of men. You'll enjoy working with them.

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The Koch 25-Cu. Ft. Reach-In Refrigerator is now available with or without an ice-maker. You can freeze a full load of 216 cubes (21 pounds of ice) in a remarkably short time...real convenience!

"I'm talking about the Koch 25-Cu. Ft. Stainless Steel Reach-In Refrigerator. Koch pioneered this design to meet battle conditions aboard ships during the war, but I've got just as many problems as Uncle Sam's Navy.

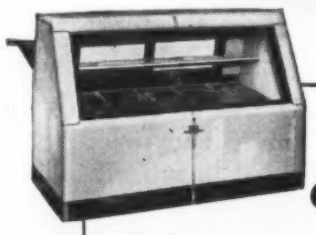
"I need an *efficient* refrigerator—and this new Koch Reach-In fills the bill. It's 100% effective. Because there's no wood used in its construction, insulation is continuous—even across the flanges of the doors. No cold gets away. It costs less to operate.

"I need more usable refrigerator space in less floor space. And the Koch Reach-In scores again. It's big! 25 cubic feet of refrigerator space in only nine square feet of floor space. Imagine!

"And how that beautiful stainless steel cabinet dresses up my kitchen. It would pass a Navy inspection any time!"

Yes, the Koch 25-Cu. Ft. Reach-In Refrigerator, made of stainless steel welded into one unit, effectively solves your refrigeration problems if you want to store more foods at lower cost. It is now available on the civilian market.

"KOCH IS TOP NOTCH"



Once Again...

Koch is manufacturing the popular 6-ft. long double duty display case. It's a companion to current 10 and 12-ft. models. Shipments to Koch distributors and dealers begin this month.

KOCH Refrigerators

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SINCE 1883

They'll Do It Every Time . . . . By Jimmy Hatlo

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"QUOTO" CURBEY, THEY CALL HIM. ALL HE DOES IS ASK THE PRICES. THE ONLY THING HE EVER BOUGHT IN WALL ST., WAS AN ALPACA COAT
HE SAYS HE'S GOT A SEAT ON THE EXCHANGE. HE PROBABLY MEANS HE'S GOT A JOB IN A SWAP SHOP
THE ONLY SEAT HE'S GOT IS ON OUR BAR STOOL. LOOKA THE SHINE ON THEM PANTS...
HE'S BAD ENOUGH— BUT THAT ERK-JAY ON THE OTHER END OF THE WIRE MUST BE QUITE A CASE, HISSELF...
PUTTING ON THE BIG-BIZNESS ACT. THEY'LL DO IT EVERY TIME.
Thanx AND A TIP OF THE HATLO HAT TO C.A. KNITTEL, 105 S. KNIGHT AV., MARGATE CITY, N.J.
JIMMY HATLO
2-10
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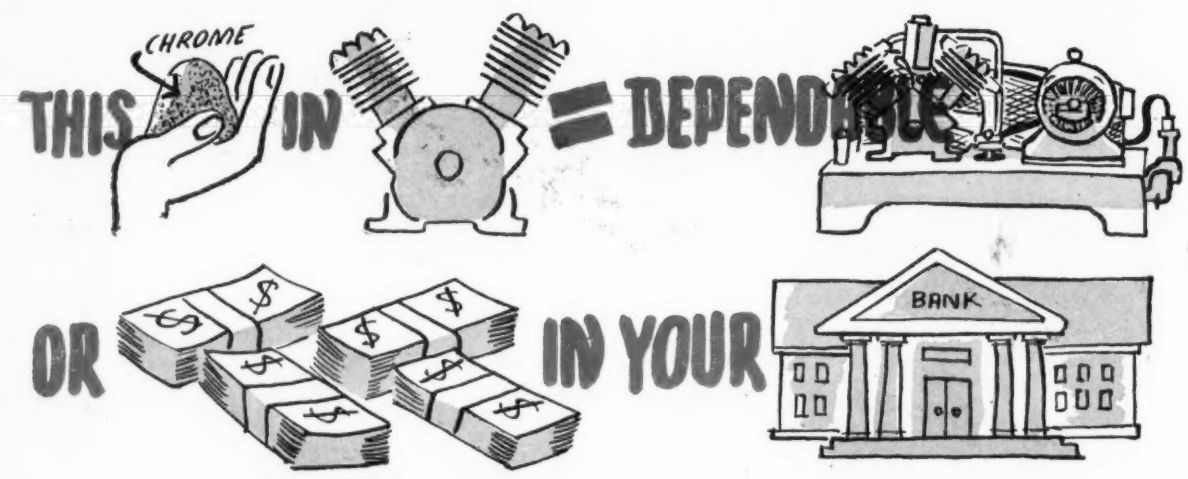
Memo to Equipment Installers



That handful of chrome in the compressor casting can well be the starting point of more profits from sales and more complete customer satisfaction. This and many other technical reasons why Brunner condensing units have become "most wanted" will make interesting listening and your business more profitable. Spend a little time with a Brunner factory representative* who talks your language —knows your sales and service problems.

The recognized quality of Brunner units has forced greatly expanded manufacturing facilities—new buildings—more assembly lines—latest developments in precision machinery. It makes good sense to "check up" and have the advantages of Brunner acceptance by your trade.

*Write us. When would you like to have him stop in?

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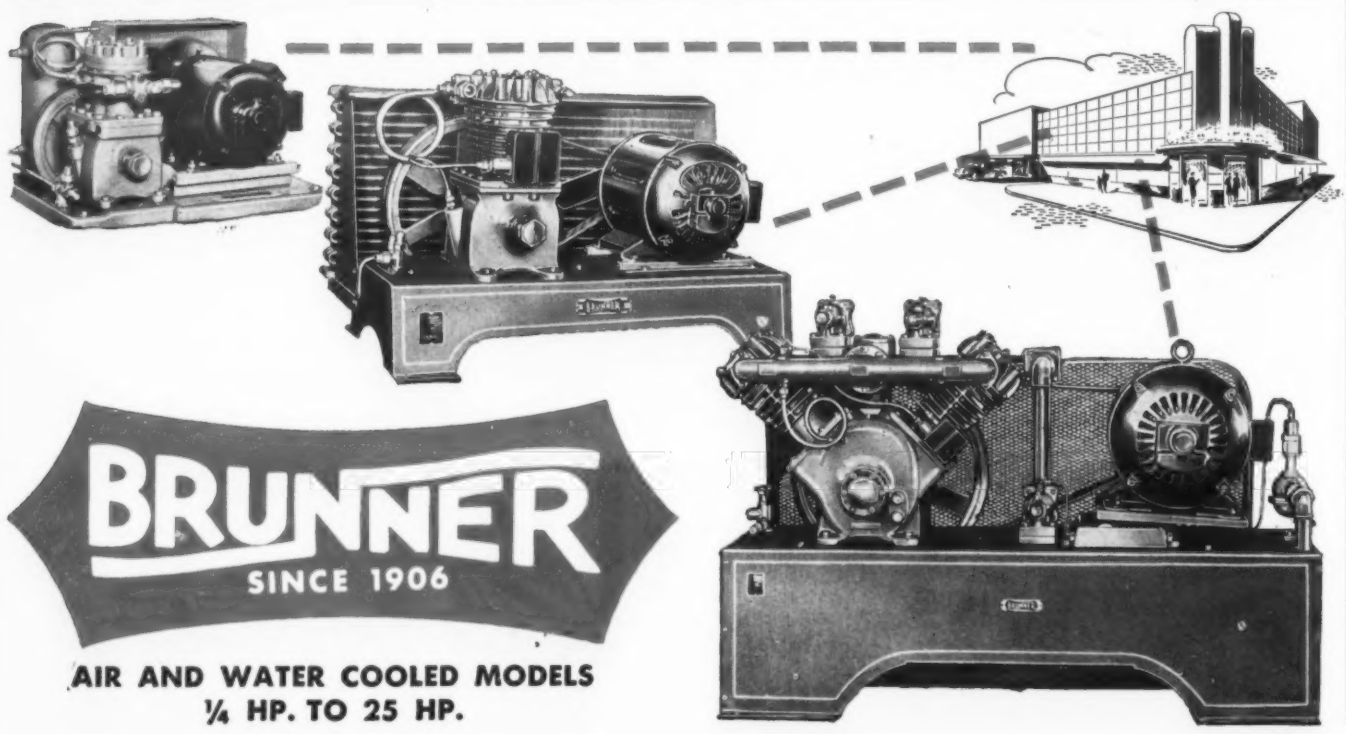

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Ability To Pay vs. Ability To Produce

SIGNS are on the horizon that those corporations which have been registering high profits are going to be socked for wage boosts by the unions. Union reasoning will run like this:

(1) Corporations are making a lot of dough; so they should pay out that dough to Labor.

(2) Living costs are high, so Labor needs that extra dough.

Both arguments, we submit, are not only fallacious and beside the point, but are contributory to a debacle if the arguers make them stick. Corporate profits are one thing; payment for services rendered another. Labor productivity is one thing; a workman's desires and self-imposed obligations are something else again.

Nearly all corporations suffer violent ups-and-downs. They have fat years and lean ones. In the fat years, they save profits to (a) tide them over the lean years, and (b) invest in new *tools* and *ideas* to expand their businesses.

If management doesn't set aside profits in good years to buy new tools and promote new ideas, the company fails to progress with changing times and eventually dies a slow death. And if management doesn't save fat-year profits, the company may suffer a quick death during a lean year.

If a corporation pays out all its fat-year earnings in the form of higher dividends, both of the above methods of committing corporate suicide will occur. And, if it syphons off its profits to pay unjustified higher wages it hastens its own demise in two other ways: (1) It prices its products out of the market; and (2) It sets up a wage pattern which will enforce losses during lean years (it's easy to cut dividends, but nearly impossible to cut wages and salaries).

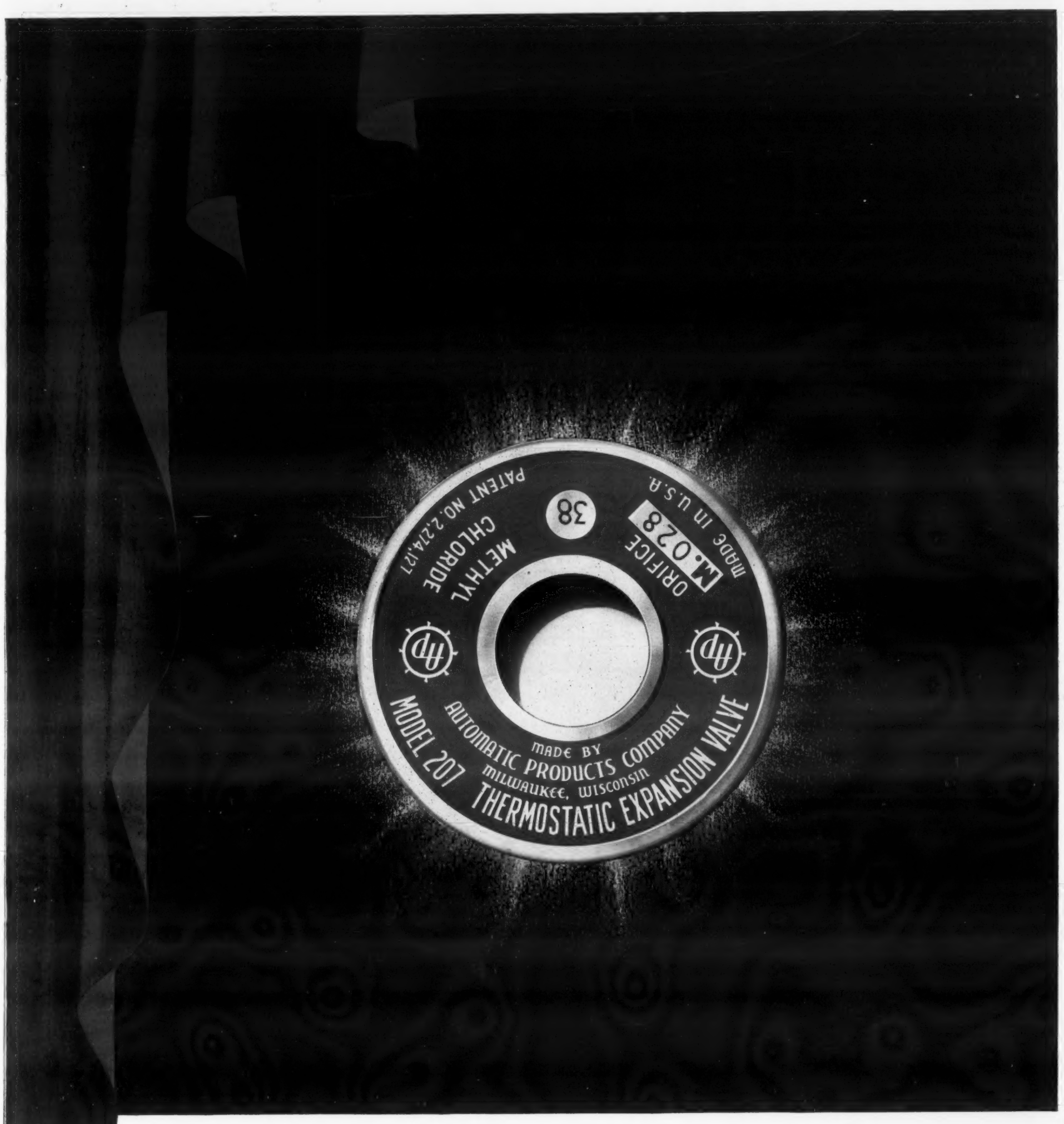
Whenever unions invoke the ability-to-pay principle, they do so to their eventual sorrow. If this principle is logical, then wage rates should be slashed when profits dip downward, or losses occur. Thus purchasing power diminishes just when it is needed most. Depression is the inevitable consequence.

The ability-to-pay principle takes profits for granted while ignoring the probability of losses. It also ignores the need for *investment in the future.* If profits must be dissipated as registered, there will be no reason or opportunity for introducing new models or, improved products, for lowering prices, or for more intensive sales efforts. In other words, progress will stop. We'll feast one year, starve the next, and finally give up the ghost altogether.

The cost-of-living argument deserves sympathetic consideration. But not when it is advanced by those who, like the British coal miners, refuse to work harder or longer hours to bring that High Cost of Living down. We're all in the same boat when we are tossed by inflationary waves. All of us must produce more to exchange for other things, or prices will continue to leap. When the money supply rises faster than the goods supply, prices climb. They come down only when we all work harder to supply more goods and services so as to catch up with the extra money.

It is a fallacy that high wages and high prices mean prosperity. Instead, they add up to *inflation.* It's high *productivity* which means prosperity. If we all *produce* more of everything, then we all have more to exchange and consume. It also is a fallacy that with higher wages we can buy more goods and services. Those goods and services must be produced before they can be consumed. Otherwise, higher wages for one group means lowered consumption for others (schoolteachers, white-collar workers, mailmen, widows, etc.).

The cost of living is a relative matter, anyway. If a man wants to get married and sire six children, that's his business. But he should realize that to support so large a family, he will have to work harder than the man who foregoes this pleasure. If a man wants to go hunting and fishing six weeks each year, he should be willing to work extra hard during the other 46 weeks so that he can afford to indulge this whim. And so on. Shorter hours, featherbedding, and slow-downs increase the High Cost of Living for everybody.



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Economical Theater Cooling

Replacement of Air Washing System by Twin Gas-Powered Units May Save Dallas Show $1,100 Annually

DALLAS, Tex.—Savings of $1,100 annually through use of a natural gas-powered air conditioning system are expected by the operators of a small movie theater here.

Some months ago Tri-State Theatres, Inc. had two 38-ton Ready-Power engined-refrigeration units installed in the Casa Linda theater here, and recently the operating costs for four months were reported by the owners to Myron Whitney, who heads up the refrigeration division of Ready-Power Co. in Detroit.

For the months of July, August, September, and October of 1947, the total cost of gas at 50 cents per 1,000 cu. ft. was $112.15 for operating the two machines. Cost of lubricating oil during this four-month period was $28.80.

Thus, for a total cost of $141.05, the air conditioning system maintained 72° F. temperature while the outside temperature ranged from 105° to 109° during the day for several weeks.

Based on current electric power rates, the cost of operating electric equipment of comparable size would have been $660.53, according to estimates of J. R. Euler, chief engineer of Tri-State Theatres.

Besides the fact that gas is used to drive the refrigeration units, there are other somewhat unusual features in this air conditioning installation.

The units themselves consist of radial compressors direct connected to International Harvester industrial engines operating on natural gas. Each engine-compressor unit supplies two 20-ton air handling units, thus forming two separate refrigeration systems—one at the stadium end of the theater and the other at the stage end.

Either system can be operated entirely independent of the other, and either one is capable of cooling the theater in moderate weather, according to Whitney of Ready-Power.

The units operate under completely automatic control, maintaining a continuous balance of the cooling load by variations in speed and compressor capacity. Complete interlock and safety controls are provided to protect against failure of auxiliary equipment.

A daily check is made on the lubricating oil of each engine. Otherwise, engine maintenance has been negligible, Whitney asserts.

Originally the Casa Linda theater was cooled with air washing equipment, but this was found inadequate for the Dallas climate, so the management decided to install mechanical cooling.

Plans and specifications were prepared by Herman Blum, Dallas consulting engineer, while the actual installation was made by the Matthews Engineering Co., also of Dallas.

It was desired to make the installation without interfering with operation of the theater, so the installation at the stadium end of the theater was almost entirely completed before the existing air washing equipment was disturbed.

After an operating check of the equipment, the air washers were removed and the remaining ductwork installed overnight.

With one system in operation it was found that the theater was quite comfortable, so the installation at the stage end was made in a more leisurely manner, Whitney reports.

One Has Temporary Housing

Since the management intends to enlarge the theater from its present 950 seats to 1,200 seats by extending the stage end, the engine compressor unit for that end of the theater is housed in a temporary shed outside the building. Eventually, it will be moved into the enlarged building, the present air conditioning capacity being thought adequate to handle the eventual increased load.

Evaporative condensers, located outside of the building but adjacent to the refrigeration units, are utilized for both refrigerant condensing and engine cooling. Dry air coils, located in the exhaust air stream of the evaporative condensers above the spray nozzles, are employed as remote radiators.

The engine cooling water is circulated by the engines' pumps and its temperature controlled by thermostats on the engines.

Four air-handling units are located in the four corners of the theater. A return air duct for the two units at the stadium end is provided at the front of the stadium section. Each of the units at the stage end has a return air grille located approximately 10 ft. below the outlet.

This is perhaps not ideal, Whitney says, but it has proven satisfactory as evidenced by the uniformity of temperature throughout the house.

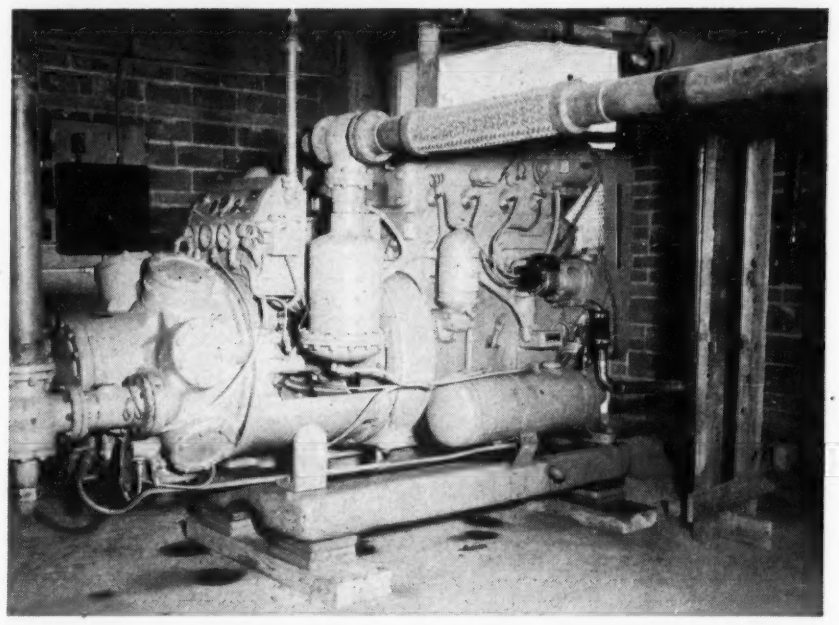
No thermostats of the conventional type are employed in the installation. Modulating motors vary both the speed of the units and the capacity of the compressors to maintain constant refrigerant temperature at the coils, regardless of the refrigerating load. Thus, the temperature of the air leaving the coils is practically constant under all conditions.

Since the capacity of the compressors can be controlled over a wide range, the engined-refrigeration units run continuously during the operating period and do not "stop and start" as is common with electrically driven equipment, points out Whitney. This means that all fresh air entering the theater is conditioned before being distributed.

With conventional equipment, unconditioned outside air is brought into the theater during the "off" period of the compressor and imposes uncomfortable conditions on the customers, he asserts. Once this condition occurs, it is difficult to remove the humidity without uncomfortably cooling the theater.

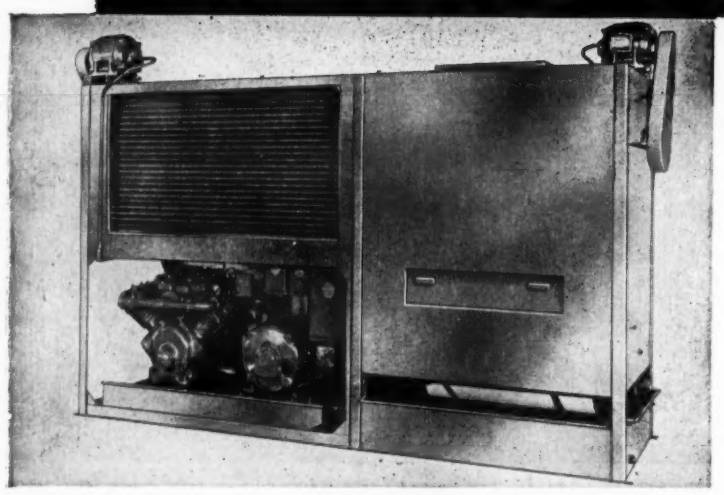
The only thermostats employed on this installation are used to reduce the amount of coil surface in operation during marginal days when cooling is scarcely required; but under normal operating conditions, the control of the theater's conditioned air is entirely by means of refrigerant temperature.

Installed While Show Goes On



This 38-ton unit at the stadium end of the Casa Linda theater was almost completely installed without disturbing the older air washing system.

GOVERNAIR
offers more
in air conditioning
equipment!



- completely packaged air-conditioner with evaporative condenser, U. S. Patent No. 2,297,928
- make only simple electrical, water and duct connections
- ready to operate
- wide range of sizes (3 tons to 50 tons)
- rapid delivery

Does high quality, and top performance spell VALUE to you? Then, take a close look at Governair's *completely* packaged air-conditioners, or at any of its other products. Flexibility, compact design, efficient operation and easy installation prove that *GOVERNAIR* is the *greatest* value known in modern air-conditioning equipment.

AIR-CONDITIONERS

EVAPORATIVE CONDENSERS

UNIT COOLERS

BLAST COILS FOR HEATING AND COOLING

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GOVERNAIR

GOVERNAIR CORPORATION—513 N. Blackwelder—OKLAHOMA CITY, OKLA.

PIONEERS IN THE MANUFACTURE OF COMPLETELY PACKAGED AIR-CONDITIONERS

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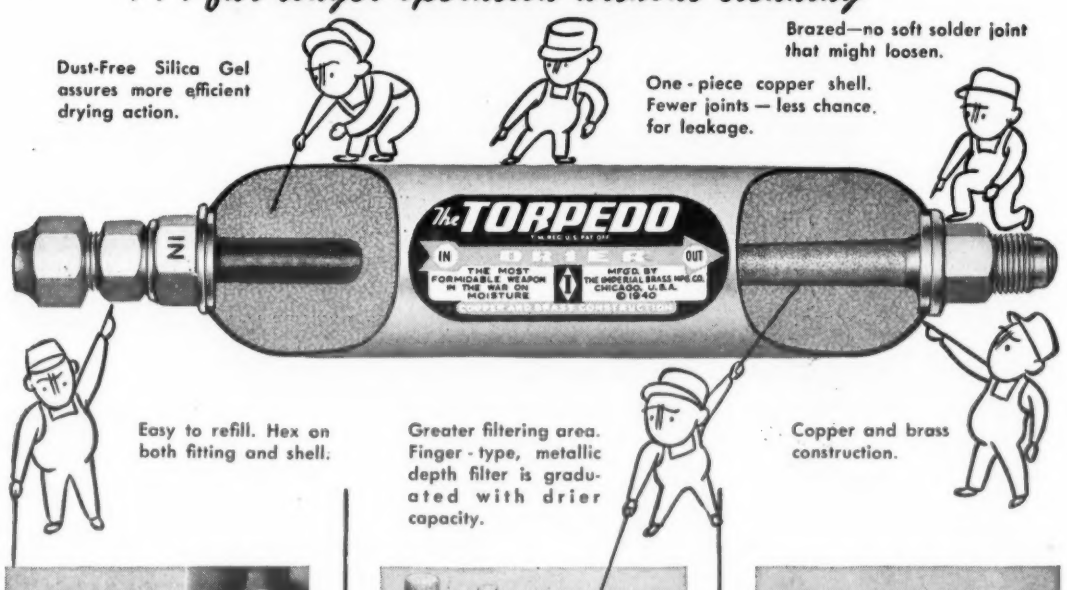
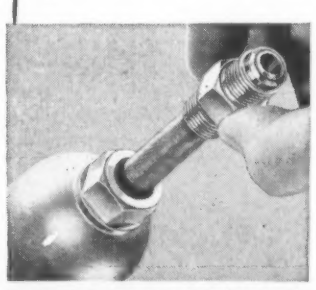
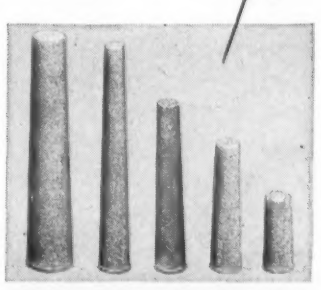
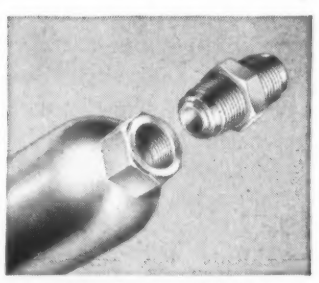
TORPEDO® DRIERS

. . . designed for faster, more efficient drying action
. . . far longer operation without cleaning


Dust-Free Silica Gel assures more efficient drying action.
Brazed—no soft solder joint that might loosen.
One-piece copper shell. Fewer joints — less chance for leakage.
The TORPEDO
IN
OUT
Easy to refill. Hex on both fitting and shell.
Greater filtering area. Finger-type, metallic depth filter is graduated with drier capacity.
Copper and brass construction.


EASILY REFILLED ON THE JOB
Two generous wrench holds, one on inlet fitting and one on shell, make it easy to open drier for refilling. No bolts to unscrew . . . no flanges or springs to remove. No soldering required after refilling.


GRADUATED FILTERING AREA
Size of metallic depth filter is graduated with drier capacity. This assures ample filtering area on larger units. Element is composed of innumerable small bronze particles fused together in a controlled atmosphere.


INTERCHANGEABLE CONNECTIONS
30, 50 and 75 cu. in. sizes have female flare threads on both inlet and outlet which are fitted with male flare unions. To change size, simply replace union furnished with reducing union of desired size.

A complete line to meet all refrigeration applications. Capacities rated in accordance with REMA recommendations. All eight sizes—1/6 to 7-1/2 HP . . . 3 to 75 CU. IN. capacity—are furnished complete with flare nuts and copper seal caps.

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THE IMPERIAL BRASS MFG. CO.
534 S. Racine Ave., Chicago 7, Ill.

Fittings • Valves • Filters • Driers • Floats • Charging Lines • Tools for Cutting, Flaring, Bending, Coiling, Pinch-Off, Swedging

Trucker Adapts Recording Thermometer To Overcome Road Shocks In Reefers

SALT LAKE CITY—By means of a special mounting which isolates the instrument from excessive vibration and road shock, the Pacific Intermountain Express Co. is now using conventional recording thermometers in its refrigerated trailers on runs between Chicago and the west coast.

"There are many good makes of temperature recorders available today, but because they are designed for static use, they are not suitable for use in a moving vehicle unless proper means of isolating them from vibration are employed," declares R. F. Allyne, director of engineering for P-I-E.

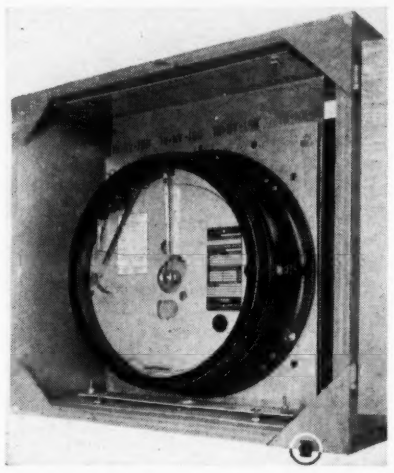
"Many truck operators, including P-I-E, have tried different methods of mounting (sponge rubber, springs, etc.), but without success. It is felt that this is the first real solution to the problem," he asserts.

By balancing the pen arm and using a special mount developed in conjunction with E. D. Haigler of the Foxboro Co. and employing rubber vibration isolators produced by the Barry Co. of Cambridge, Mass., a standard recorder will render a legible chart despite over-the-road vibration, Allyne says.

"Use of a standard recorder without such special isolation results in the pen arm giving such a wide sweep that it is next to impossible to read the chart with any degree of accuracy," he contends. "Furthermore, this action consumes ink so fast that the supply will become exhausted before destination is reached and the pen will make no mark on the chart."

In the initial experimental work of balancing the pen arm in the instrument, a weight was fashioned from a piece of tin can and lumps of solder.

This weight was attached at right angles to the short section of the vertical pen, extending above the fulcrum, and a brief trial and error method soon revealed the correct amount of solder to balance perfectly the relatively long pen arm, ink well, and ink below the fulcrum, Allyne explains.



This 12-in. recording thermometer is isolated against road shock by this portable special mounting devised by Pacific Intermountain Express for use in its refrigerated trailers. Circled at lower right is the rubber vibration isolator used in the mounting.

The case of the 12-in. circular recorder is securely mounted on a metal plate which is bent to make a wide flange at the bottom. This plate, with the recorder is then mounted by means of the rubber vibration isolators on a second plate, which has flanges top and bottom.

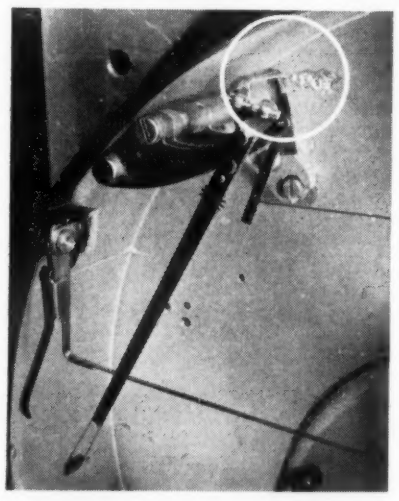
The vibration isolators fit like grommets in the two plates, the number and placing of them being determined by the weight and balance of the recording thermometer.

As a precaution in the event of rough handling, the rubber mounting is augmented by machine screws (two at the top and two at the bottom) floating through the open center of the vibration isolators and adjusted with lock nuts, so that the travel of the recorder mounting plate is limited to a point short of where the rubber mounts would be pulled from their holes.

Suitable holes are also provided in the mounting plates for the capillary tube connections.

The whole assembly has been mounted by P-I-E in a ventilated box with hinged doors on both front and back. Besides making the instrument portable, this box also provides additional protection against damage. Sufficient space was allowed in the rear of the box for storage of the capillary when not in use.

Commenting on the instrument, Allyne declares, "On a recent test run over roads not in first class condition the recorder was placed on the floor, directly over the trailer wheels. The maximum sweep of the pen did not exceed 1/32 of an inch."



Closeup of the pen arm in the recording thermometer shows (within the circle) how a counterbalancing weight of tin and solder was attached to the arm to help it maintain a steady response to temperature changes and a minimum of deflection due to road shock and truck vibration.

S. R. Hirsch Granted Leave of Absence

NEWARK, N. J.—S. R. Hirsch has been granted a leave of absence from active duty by the American Coils Co., it is announced by M. Parcaro of the firm.

Hirsch will continue to serve as engineering consultant and a director of American Coils Co.

New Omaha Contractor

OMAHA, Neb.—The Bayer Electric Co., electrical heating and air conditioning engineers and contractors here, has filed articles of incorporation with the Nebraska secretary of state. The firm is capitalized at $50,000 and incorporators are Alfred G. Ellick and William C. Ramsey.

Manual Gives Layouts For 7 Locker Plants

SAN FRANCISCO — Prospective builders of frozen food locker plants and operators who plan to remodel existing facilities, will find new technical data and designs in a Palco Wool insulation manual recently published by The Pacific Lumber Co. here.

The 12 page booklet contains seven different plans and layouts for existing buildings in addition to complete designs, material lists, and construction details and procedure. Typical construction methods for masonry and wood frame buildings are covered in illustrations and descriptive texts.

Chidester To Represent Remco In 3 States

ZELIENOPLE, Pa. — Appointment of Charles W. Chidester to represent Remco, Inc. in the states of California, Nevada, and Arizona has been announced by K. M. Newcum, president.

C. W. Chidester

Chidester has spent the last 14 years with the Pacific Scientific Co. where for the last six years he has been manager of refrigeration and air conditioning in their Los Angeles office.

For General Applications

CHECK with Ranco FIRST

The Ranco Type O-1505 Pressure Control, with high pressure safety cut-out, has a single pole, snap-acting switch which closes the circuit on increase and opens the circuit on decrease in pressure on the low side. It also opens the circuit on the high pressure rise and recloses the circuit when that pressure drops to 40 lbs. And the O-1505 is just one of the complete line of Ranco Refrigeration Controls that provide satisfactory, trouble-free service. There's a Ranco Control for every application . . . ask your Ranco wholesaler to show you the complete line . . . check with Ranco first.

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★ Dependability
★ Greater Customer Satisfaction
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Ranco Type O-1505 Dual Pressure Control for general commercial application. Adjustable high-pressure cut-out with independent visible scale.

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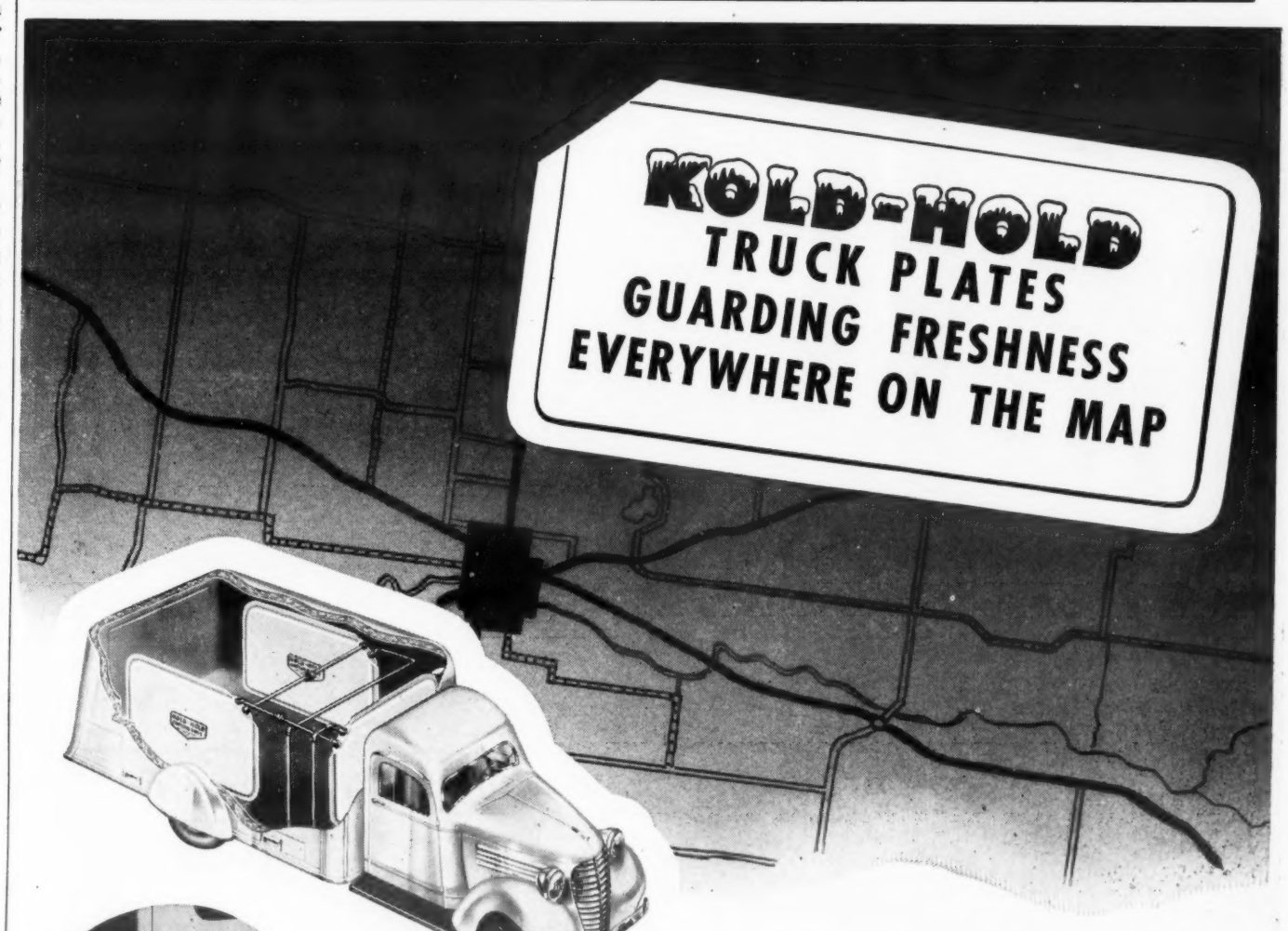
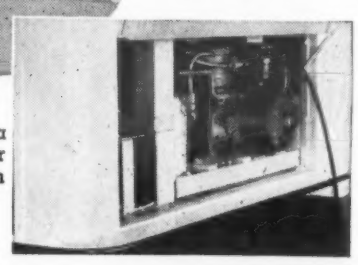


Make-and-break valve, which connects to your ammonia line for overnight charging.

If necessary, a small compressor can be mounted on the truck.



Cut-away view of KOLD-HOLD Plate, showing seamless, no-leak steel coil.

Simple . . . compact . . . efficient KOLD-HOLD HOLD-OVER Plates give you the utmost in night-and-day protection for perishables. Easily installed in your trucks, they:

1. Provide a cooler-room on wheels.
2. Eliminate spoilage.
3. Operate economically — less than 10c per day.
4. Assure safe minimum temperature.
5. Last a lifetime — guaranteed 10 years.
6. Keep truck bodies clean — sweet — dry — odorless.
7. Permit longer runs due to adequate refrigeration.
8. Increase sales by keeping perishables fresh — flavorful — attractive.
9. Take up little space, leaving more for payload.

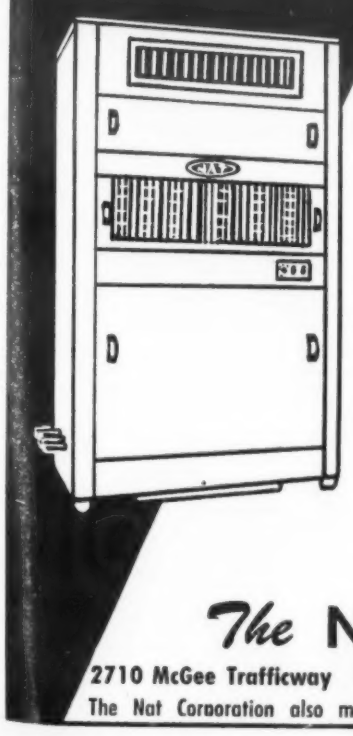
KOLD-HOLD

Jobbers in Principal Cities

PROCESSING TRANSPORTATION STORAGE
protects every step of the way

KOLD-HOLD MANUFACTURING COMPANY - 500 E. HAZEL ST., LANSING 4, MICHIGAN

The NAT PACKAGED
Self Contained
AIR CONDITIONER
EASY TO INSTALL — ECONOMICAL IN UPKEEP



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The Answer to the Service-Man's Prayer

All working parts are accessible without having to tear down the cabinet.

The NAT comes in 3 sizes: 3.3, 4.2 and 5.4 Tons

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VALVES, FITTINGS and ACCESSORIES
For All
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PITTSBURGH 26, PENNA

Partners Study Layout, Equipment, and Rates Of 35 Locker Plants, Then Build Their Own

MARTINSBURG, W. Va.—In this city of 20,000 people near the northern end of the Shenandoah Valley, surrounded by a rich farming and fruit growing area, Robert Fierro and James McDonald have erected a new locker plant, designed to provide a maximum of service and convenience to the customer.

The building, of 8-in. hollow tile on a concrete foundation, measures 70 ft. wide by 125 ft. deep, and is one story high. It faces a gravel court or parking space, which is right off the main street of the town, and is illuminated at night. The site adjoins that of the former Park's Mill; years ago this was driven by water power.

At the rear of the building is a loading platform with an entrance from another street. One door leads from this platform into the bulk storage while another leads through the hallway into the processing room; this hallway has an overhead track with scales where the meat is weighed and tagged before entering the chill room.

Double sets of plate glass windows light the lobby, which is 16 ft. wide and extends all the way across the front of the building. The lobby floor is of asphalt tile and the ceiling is covered with acoustic Celotex. The lobby is comfortably cool in summer and heated with steam units in winter. Another plate glass window, measuring 119 in. by 59 in., is arranged with double layers to prevent frosting and gives patrons a full view from the lobby into the aging room. Further to the left is the door, equipped with triple glass, leading into the locker room.

Lobby of Martinsburg, W. Va., locker plant

A person standing in the center aisle of the locker room can, indeed, look through the glass door and the plate glass window and see the people in the street. This, together with an alarm button inside the door, keeps them from feeling too shut in while using the lockers.

The layout shows the ample size of all the rooms. The processing room is equipped with a large meat cutting block, two cutting and wrapping tables, bandsaw, meat rail leading into the aging room, sausage grinder, and two double sets of stainless steel tubs. These are for processing vegetables; two of the tubs have steam coils in the bottom for use when blanching vegetables. Two kinds of scales are provided, together with all the other accessories such as rubber stamps card file, freezing trays, etc.

The bulk storage rooms are proving so much in demand that coils will be installed soon in the future storage. The rear end of the main locker room is now used as a bulk storage. This room will ultimately hold 1,750 lockers, of which 1,000 are already in place. If additional storage rooms are used for lockers the plant can accommodate 2,000.

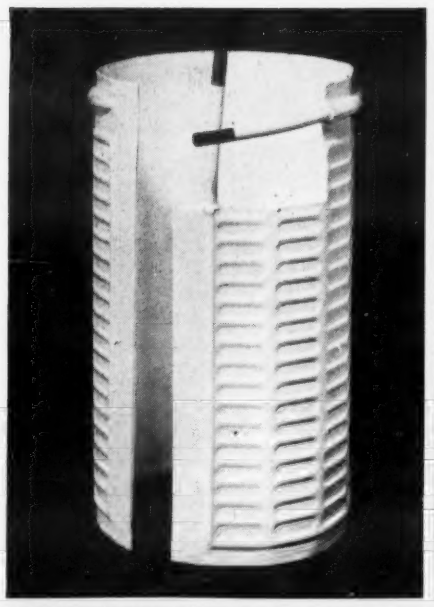
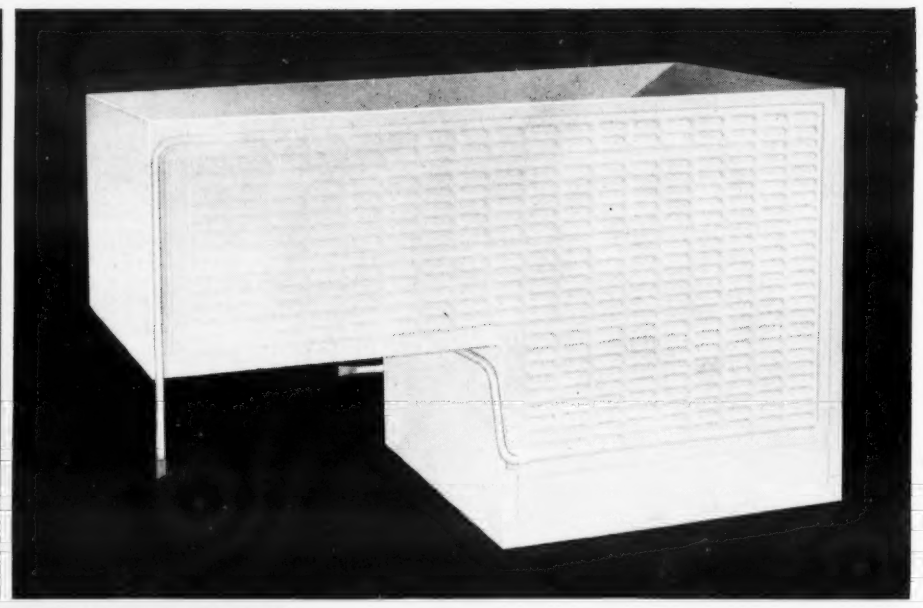
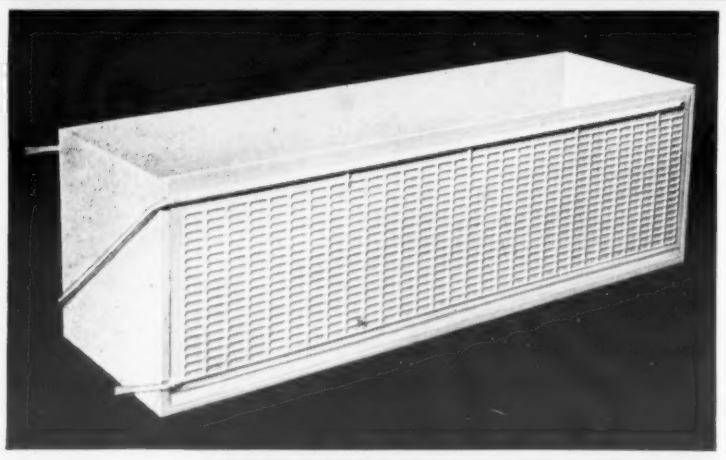
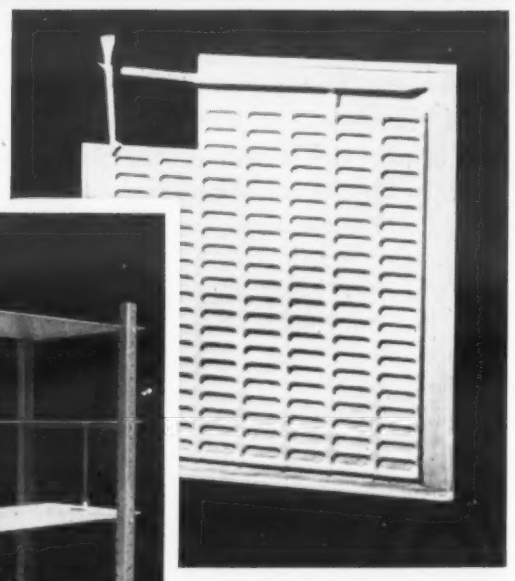
The rooms are insulated with mineral wool, 8 in. thick on the outside walls, ceiling and floors, and 6 in. on the walls inside. Ten Jamison cold storage doors are used.

The chill room is cooled by a Bush

(Concluded on next page)

Table of Charges For Processing

Vegetables	
Must be cleaned, shelled, etc., ready for blanching when delivered.	
Blanch, cool, pack, label, quick-freeze, and place in locker	$0.07 per pt. 0.08 per qt.
If already blanched and cooled	0.06 per pt.
Label and quick-freeze home packaged vegetables	0.01 per pt 0.02 per qt.
Fruits and Berries	
Must be clean, ready for sugar or syrup when delivered. Add sugar or syrup, pack, label and quick-freeze	$0.10 per pt. 0.14 per qt.
Label and quick-freeze home packaged fruit	0.01 per pt. 0.02 per qt.
Bulk freezing of poultry dairy, and other products	
In larger quantities	$0.01 per lb.
Bulk storage at zero	0.01 per lb.
Special rate for still larger quantities	per mo.
Overflow locker storage 0.50¢ a week, up to 100 lbs.; over 100 lbs. $0.01 per pound per month.	
Minimum processing or handling charges $0.15.	
Meat Processing	
All meat will be inspected and wrapped at the plant before freezing.	
Chilling only, 24 hours (overnight)	$0.00¼ per lb.
Aging (week to 10 days or 2 weeks)	0.00¼ per lb.
Chilling and aging (for stores)	0.00½ per lb.
Cutting only	0.01 per lb.
Grinding only	0.01 per lb.
If already cut, wrap, label, date, quick-freeze	0.02 per lb.
Complete service—chill, age, cut, grind, wrap, label, quick-freeze and place in locker	0.03 per lb.
Poultry and Game	
Must be dressed and drawn when delivered, ready to cook. Must be wrapped at plant, too.	
Wrap, label, and quick-freeze	
Chickens and ducks	.10 each
Turkeys	.25 each
Fish	.03 per lb.
Wild Birds	.02 per lb.
Rabbits, wild or tame	.10 each
Other poultry and game, including deer (same as beef)	.03 per lb.

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In addition to a complete line of stock sizes of plates, shelves and plate banks, Yoder engineers and builds to order plates and liners for all kinds of food freezer cabinets, processing tanks, display cases, beverage and ice cream coolers and dispensers. We offer cooler and freezer manufacturers engineering service and estimates, to work out with them the most efficient and economical answer to their special problems. You may consult us freely, without cost or obligation.

The Yoder basic plate design is the most efficient yet devised—giving the maximum prime heat pickup surface per square foot, as proved by the K-factor—2.5 for temperatures below 20°F—the highest obtainable with any evaporator plate.

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Get'em Assembled or knock-down
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MASTER will ship on your instructions all drawers—either completely assembled to your order OR knockdown, you order we ship accordingly. ALSO we will ship one locker up to a carload or more, any time, on time. You set the pace and we will meet it. Better get your supply NOW of

MASTER FOOD CONSERVATORS

while the getting is good. We have the steel—we have the facilities to deliver. Steel is still critical. Don't wait—order NOW. Better be safe than sorry.

WIRE, PHONE, WRITE

Don't fail to advise whether to assemble drawers or not. Also whether snap or barrel type locks are preferred. We'll follow your instructions and ship accordingly. Please give specific instructions.

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Member of Frozen Food Locker Institute, organized for your protection.

Over 1,000,000 Master Food Conservators in Use

Large Rooms, Ample Lighting Make Use of Martinsburg Locker Plant More Agreeable

(From preceding page)
air unit with fan, and is held at 35° F., as is the aging room adjoining. Wall coils cool the aging room.

There are two quick-freezing rooms of the "open tunnel" type, one held at -15° F. and the other at -30° F. The overhead coils are welded into large headers which lead to a 16-in. accumulator, 8 ft. long. The liquid is, of course, fed under float valve control.

Each room has a double Lau blower, driven through V-belts by a 3-hp. Ideal motor. A steel framework supports the coils, fans, and motors.

AT RIGHT: Aisle in locker room.

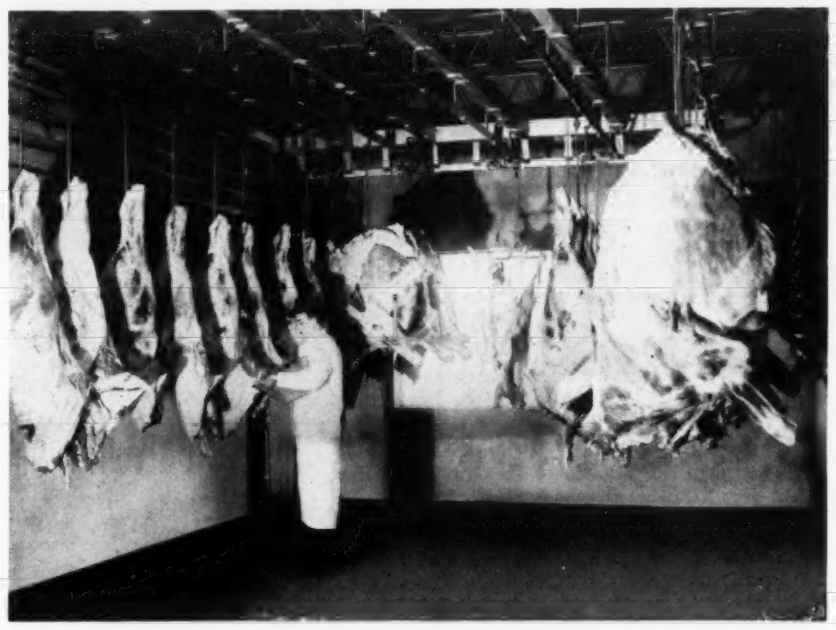
The foods to be placed in the lockers are trundled into the -15° F. quick-freezer on narrow push trucks. The -30° F. freezer is used for foods packed in bulk. Both freezers lead into the main locker room.

The bulk storage has overhead coils clear across the ceiling. In the corner of this room is an accumulator for the low-temperature piping. Another accumulator, for the 35° F. load, is in the corner of the chill room.

The locker room has the piping arranged in three layers above the aisles. These 2-in. coils are so connected that each group can be individually defrosted with hot gas without disturbing the others.

Knickerbocker lockers are used throughout. Each stand contains six compartments, three drawers, and three doors. All lockers measure 16 in. wide by 24 in. high by 30 in. deep. The room is brightly illuminated by rows of 10 lights, each contained in a waterproof glass and metal guards, above each aisle.

The owners visited a great many plants before deciding upon the layout and equipment. They also made a careful study of the rates for various services charged in some 35 plants in this general area. The rates shown on the opposite page are the resulting average.



The meat aging section.

All the lockers rent for the same amount—$16 each, per year. One dollar of this sum covers insurance, up to $100, against fire, power failure, and theft. Several hundred of the lockers were already rented when the plant opened. West Virginia now has over a dozen locker plants, three of the new ones being within 75 miles of Martinsburg.

It requires four people to operate the plant. The manager has a girl assistant. The butcher also has an assistant. The plant is open from 8 a.m. until 5 p.m., and until 9 on Saturdays. It is closed on Sundays.

The refrigerating equipment is under automatic control. All the wiring is in conduits; the conduits in the cold rooms were sealed against moisture, after the wires were inserted, with special melted wax.

The machines include a Frick 5¾ by 4 booster, a 5 by 5, and a 7 by 7. The 5 by 5 operates practically continuously, while the other two machines cut in as needed. All the machines have Flexo-Seals and all three driving motors are mounted above the V-belt wheels. Three high-pressure cutouts and four low-pressure cutouts protect the system.

The 16 in. by 18 ft. MS condenser is mounted above a 24 in. by 16 ft. receiver which holds 3,500 lbs. of ammonia. The gas and liquid cooler is on the opposite side of the room.

Other automatic equipment includes an A-B drum switch, a two-volt relay and a G-E timing relay; each room has, where required, a thermostat and thermo valve, electric control valve with bypass, back pressure valve, and float valve with bypass. Each room has a thermometer.

The eight galvanized push trucks are 40 in. long by 19 in. wide and each has 12 racks containing galvanized trays.

Patrons come to this plant from as far as 25 miles away. Large quantities of cheese and other dairy products are brought in for storage. Wholesale grocers in the town make frequent use of the plant. A local grower of turkeys has the dressed birds quick-frozen in the -30 room. Local butchers use the holding rooms to excellent advantage.

Push Trucks Roll Into Freezing Room

An attendant moves four of the locker plant's galvanized push trucks into the -15° quick-freezing room. These trucks are small enough to be used along the narrow aisles of the locker room.

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on your next job choose a

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a condensing unit for every installation

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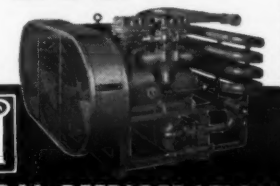
AUTOMATIC REFRIGERATION

You can effect a real ECONOMY with dependable LIPMAN refrigeration. LIPMAN machines are performance-proved with over 30 years experience in the commercial refrigeration field. Units available in ¼ thru 40 H.P.



GENERAL REFRIGERATION
DIVISION
YATES-AMERICAN MACHINE CO., Beloit, Wisconsin

United's NEW

DRY-KOOL BOTTLE COOLER

4 SIZES (REMOTE OR SELF CONTAINED) 50 in., 6′, 8′, 10′ LENGTHS

Model DK8P
self contained
8 foot
bottle
cooler

STAINLESS STEEL SLIDE AWAY DOORS OPEN LIKE MAGIC

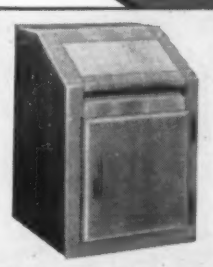
One quick, easy motion lifts and slides these doors out of sight. Saves time and temper, speeds service.

ELIMINATES SLIPPERY WET BOTTLES • SPEEDS SERVICE AVOIDS ACCIDENTS

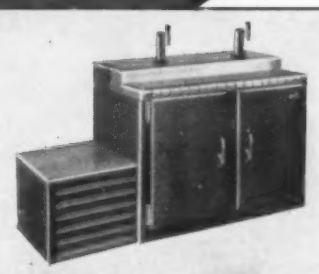
Whether the volume is 25 or 2500 bottles an hour United Dry-Kools assure speedier service, cleaner, safer handling and more profitable operation. Easy-opening stainless steel roller bearing slide away doors give ready access to bottles and flush type decapper speeds service. Made in 2, 3, 4, or 5 section sizes, each section has efficient blower for rapid balanced cooling and holds over 195 twelve ounce bottles. Coolers fit under standard bar, are finished in high baked brown Dulux.

Some territories still open—write or phone

UNITED REFRIGERATOR COMPANY
Sales Division
350 ROBERT STREET
ST. PAUL 1, MINNESOTA



KUBEMASTER
Make and store your own ice cubes—freeze as much as 2½ bushels a day. Space for cooling bottles, trays for garnishes. Fits under standard bar.



KOOLMASTER
Direct draw dispenser for mechanical refrigeration. Chrome fittings, one piece sink with stainless steel splash board. 2 and 3 keg sizes remote or self contained.

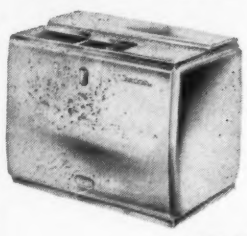
DISTRIBUTORS WANTED!

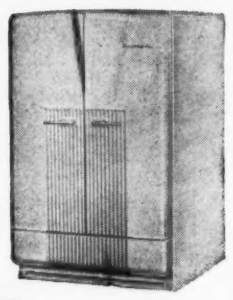
ORDER FLOOR SAMPLES, AND YOU WILL BUY CARLOADS!

ALERT DISTRIBUTORS AND DEALERS

WILL BE FRANCHISED • BUYERS EVERYWHERE
—FOR BUXTON'S **THREE** GREAT NEW REFRIGERATORS •
NEW STREAMLINING • NEW ENGINEERING FEATURES

SO COMPACTLY DESIGNED THAT THE SPACE REQUIRED IS ABOUT THAT OF THE AVERAGE 12 Cubic Foot Refrigerator, but you actually get a Refrigerator with 22 Cu. Ft. normal temperature . . . the Combination Refrigerator is 19 Cu. Ft., half Zero—and half normal and the all Zero refrigerator is 18 Cu. Ft.—And the *BUXTONAIRE* DRY Cooler for bottled beverages and food products.





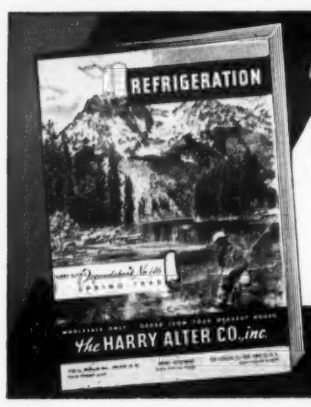
All inquiries will be personally contacted within a few days.

Manufactured by

BUXTON, INC.

1960 E. 48th St. Phone LUcas 8158 Los Angeles (11) Calif.

For descriptive literature—price lists and territory information write, E. George Sanders, General Sales Manager, at our temporary National Sales Offices, 3120 N. Main Street, Dayton, Ohio, or if you prefer phone him Dayton time 9:30 a.m. to 4:30 p.m.



IT'S OUR GREATEST SPRING DEPENDABOOK NO. 146

AMERICA'S FINEST SOURCE FOR REFRIGERATION, AIR CONDITIONING and ELECTRIC MOTOR Parts and Supplies

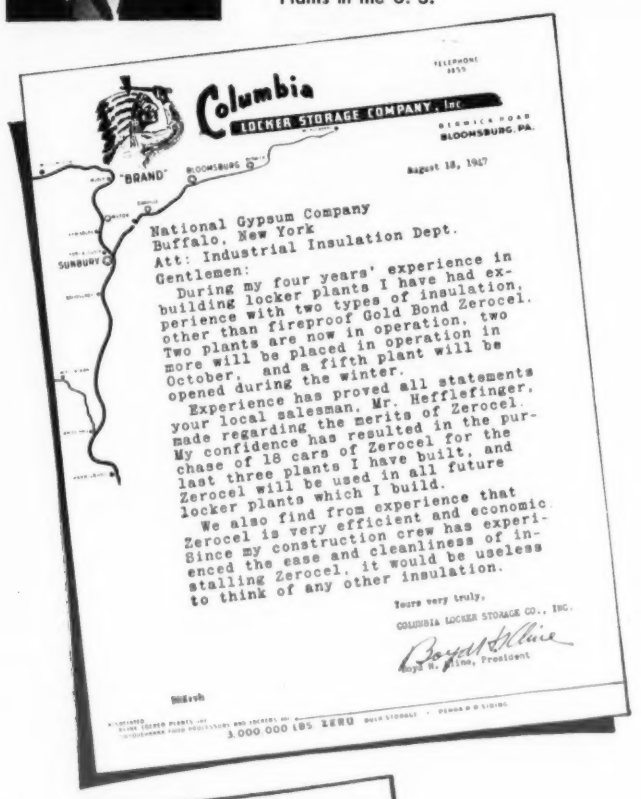
Write for your copy today on your letterhead, please

THE HARRY ALTER COMPANY, INC.
1728 S. Michigan Ave., Chicago 16, Illinois
134 Lafayette Street, New York, 13, New York

"It would be useless to think of any other Insulation"

says:

Boyd H. Kline, President of Columbia Locker Storage Co., Inc. One of the largest builders and operators of Locker Plants in the U. S.



Columbia LOCKER STORAGE COMPANY, Inc
BLOOMSBURG, PA.

August 18, 1947

National Gypsum Company
Buffalo, New York
Att: Industrial Insulation Dept.
Gentlemen:

During my four years' experience in building locker plants I have had experience with two types of insulation, other than fireproof Gold Bond Zerocel. Two plants are now in operation, two more will be placed in operation in October, and a fifth plant will be opened during the winter.

Experience has proved all statements your local salesman, Mr. Hefflefinger, made regarding the merits of Zerocel. My confidence has resulted in the purchase of 18 cars of Zerocel for the last three plants I have built, and Zerocel will be used in all future locker plants which I build.

We also find from experience that Zerocel is very efficient and economic. Since my construction crew has experienced the ease and cleanliness of installing Zerocel, it would be useless to think of any other insulation.

Yours very truly,
COLUMBIA LOCKER STORAGE CO., INC.
Boyd H. Kline, President

- Efficient, "K" factor of 0.24 BTU at 60° F.
- Fireproof
- Will not absorb moisture
- Odorless
- Will not settle
- Immune to fungus, rot and decay
- Vermin-repellent
- Easy to cut with a knife

GOLD BOND ZEROCEL INSULATION

SEND FOR FREE BOOKLET TODAY

National Gypsum Company, Buffalo 2, N. Y.

Gentlemen: Please send me a FREE copy of the new Gold Bond Zerocel Booklet, "Fireproof Refrigeration Construction." A-3

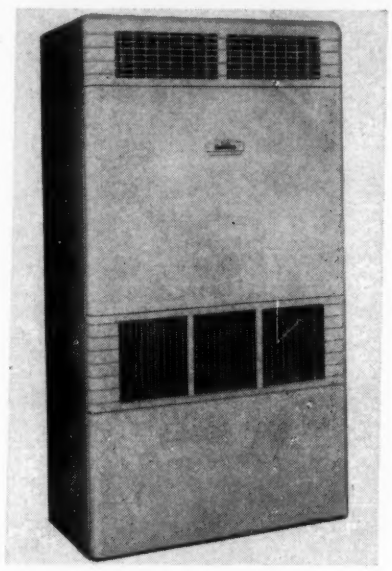
Name .....

Company .....

Street .....

City ..... State .....

What's New



* * *

Condenser Coil In USAirco Package Unit Saves Water

MINNEAPOLIS — A newly redesigned, packaged air conditioning unit that cools, dehumidifies, filters, circulates, and ventilates has been announced by the United States Air Conditioning Corp. here.

Made in 3 and 5-ton sizes for installation in stores and offices, the conditioner features a new hermetically sealed compressor-motor unit.

It also features a new water-saving condenser coil designed by usAIRco engineers. Coils and refrigerant lines are of all-welded construction. "Freon-12" is the refrigerant used. The welded steel cabinet is equipped with glass fiber insulation. Air filters are of the throw-away type.

Though the unit is essentially a packaged one, it can be made into a remote installation by adding a duct system, according to the company. Only connections necessary are to an electrical outlet, water system, and drain.

Once the system has been started, a regulating thermostat and automatic controls operate the unit automatically. By turning the control to "fan," the fan alone can be operated, allowing the unit to function as a ventilator, the company states. For winter use, the conditioner can be equipped with heating coils to operate as a warm air heating system.

Kit's Impact Tool Helps Finish Jobs 90% Quicker

NEW YORK CITY — A new all-purpose tool kit, which facilitates the installation and repair of many air conditioning and refrigeration jobs has just been announced by Ingersoll-Rand Co.

The kit is compact, portable, and permits the serviceman to use the same tool for a multitude of jobs—simply by using the proper accessory. It includes the new electric impact tool and standard accessories.

With this kit the mechanic may easily and quickly perform the following jobs—nut-running and nut-removal, drill steel, masonry and wood, ream, apply and remove studs, tap, drive and remove screws, extract broken cap screws and studs, do hole saw and wire brush work.

The impact tool weighs 6½ pounds. Because of its exceptional power and light weight, it saves as much as 90% time on virtually all service jobs, Ingersoll-Rand claims.

The kit is assembled complete or with accessories as required. With standard equipment, the kit contains the impact tool with a Jacobs collet type chuck, six hex sockets of varying sizes, a Morse Taper socket, and adapter sleeve. If some items are already available, price allowance is made on those omitted.

The photograph shows a completely outfitted kit containing all standard equipment plus twist drills, reamers, taps, carbide-tipped masonry drills, hole saws, screw and stud extractors, wood bits, wire brushes—all in sizes specified. The kit also contains screw drivers and quick change chuck, square Phillips and Reed and Prince bits, together with screw driver adapter for these bits. A universal joint and anvil extensions are available.

The impact tool is the only Universal motor driven, all-purpose tool employing the impact mechanism. It plugs into any AC-DC electric socket and runs as any conventional electric tool till the going gets tough. Then the impact mechanism automatically functions and delivers 1900 rotary impacts per minute to the job. This rotary power is essential to perform difficult jobs, without torque effect to the operator.

The impact tool is available with either 110V or 220V motors as required.

Ingersoll-Rand tool kit

Specifications are as follows:

Apply and remove nuts—The unit is conservatively rated to handle nuts and cap screws up to ⅜ in. thread size.

Drill—Rated for ¼ in. drilling in metal—up to ½ in. by step drilling.

Ream—Reams up to ½ in. diameter.

Tap—Taps from ¼ in. to ½ in.

Drive and remove screws—All types of machine screws up to ⅜ in. thread size and wood screws up to size No. 20.

Drive and remove studs—Capacity up to ⅜ in. thread size.

Extract broken cap screws and studs—Up to ⅜ in. thread size.

Run wire brushes—Various types of wire brushes with round shanks up to ⅜ in. diameter.

Woodboring—Up to ⅜ in. twist drills with collet-type chuck; up to 29/32 in. with Morse Taper.

Drill brick and masonry—Carbide-tipped masonry drills up to ⅜ in. diameter.

Finger-Tip Coupler Makes Fast, Tight Connection

CHICAGO — Tight connection of valves, evaporators, condensers, or gauge sets with gauge, pressure, or vacuum lines is effected by Electrimatic "Quick Coupler" without the use of tools.

Finger-grip surface allows firm grasp, and slight turn makes connection. Coupler is available in SAE flare sizes ranging from ¼-in. male x ¼-in. female to ⅝-in. male x ⅝-in. female. It is manufactured by Electrimatic Division, The Simoniz Co.

Don't be late, for '48!

Remington's powerful (11,000 btu/hr.) Model 10 Deluxe has no direct competitors. It's the only air-cooled room air-conditioner in the one-ton class on the market today.

That's why it was so popular at the Cleveland and New York shows; why so much valuable territory is already signed up; why so many units have already been shipped.

Thousands of the people who now own room air-conditioners are your best prospects. They need and want more powerful units, just like Model 10.

We'll be glad to ship you a sample of this thoroughly tested unit, provided you are in one of the few territories that is still open.

Better act now! Or you'll be too late for '48.

REMINGTON
Air Conditioning
DIVISION
Cortland, New York

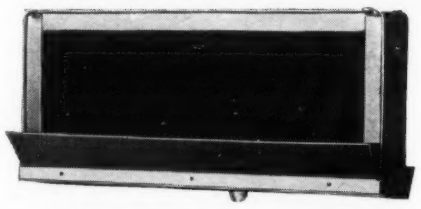
What's New (Cont.)

Ace Bob-Tail Fountain Meets Sanitary Code

NEW YORK CITY—Development of a new, all-sanitary bob-tail, which completely meets all New York City Department of Health specifications has been announced by the Ace Soda Fountain Mfg. Co., Inc., an affiliate of the Ace Cabinet Corp. of New Bedford, Mass.

The new model will be put into production as soon as possible and its sanitary features will be incorporated in other models of the firm's bob-tail and creamer units.

Unit Cooler, Defroster Introduced by Betz Corp.



Water defrost unit Model Z

* * *

HAMMOND, Ind.—A new half-round ceiling unit cooler for walk-ins and florist boxes and a new low temperature water defrost unit have been announced by the Betz Corp. here, maker of "Filterpure" low side equipment.

The model "HR" ceiling unit cooler is manufactured in six sizes from 260 to 867 B.t.u. per 1° T.D. Its half moon design permits installation on the cooler ceiling next to the wall, according to the company.

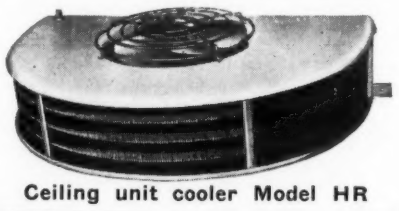
Slow air is said to be forced over the coil by a low velocity fan motor in the lower side of the unit. Distribution of this air takes place through a 180° arc, blanketing the cooler with cooled air. Relative humidity maintained in excess of 85% is claimed.

The model "HR" unit also features an activated carbon air purifier, a built-in liquid distributor for limiting pressure drop to a maximum of 1 lb., built-in louvres, and slide hangers.

The water defrost unit, called the model "Z," covers the entire coil with a water spray, thus assuring unusually fast defrosting, according to Betz. It is made in capacity ratings up to 1,800 B.t.u. per 1° T.D. and provides low temperature cooling to -20° F.

Its small over-all dimensions make it suitable for installations where space is limited, the company says.

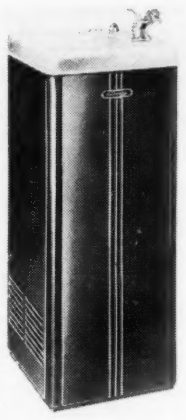
* * *



Ceiling unit cooler Model HR

5-Year Warranty Covers 4 Cordley Water Coolers

NEW YORK CITY—The new 1948 line of Cordley electric water coolers, seven models strong, was announced recently by C. M. Cordley, president of Cordley & Hayes.



The new line includes four hermetically sealed units carrying a "unique" five-year replacement warranty and three open-type units carrying the normal 12 months guarantee. The hermetics are powered by a ⅛-hp., 60 cycle, 115 volt, single phase, a.c. motor.

The line embraces one hermetic and one open unit each in the bottle type, restaurant type, and office or factory type coolers. The fourth hermetic unit is a water-cooled model of the office or factory type for applications where unusual dust or lint conditions exist.

The bottle-type coolers (HBCS-3 and BCS-3) feature a monel cooling tank, tinned inside and out for maximum sanitary protection, and an oversized waste water bucket with chrome plated non-splash tray. The water bucket has a 3-qt. capacity, said to be ample for a day's service.

The restaurant (RHCS-10 and CS-10) and office or factory type (HCS-10, HCS-10W, and CS-10) units feature:

A heavy-duty, cast brass, chrome plated, self-closing bubbler with adjustable stream regulator.

An improved drain cover which can be unscrewed by hand to inspect or clean waste water outlet and precooler assembly. Cleaning can be done with an ordinary bottle brush, according to Cordley.

Water fittings brazed to a single channel which is said to eliminate all possibility of twisting loose.

Panels that are removable for access to the mechanism.

Cordley claims that all models are built to operate successfully and efficiently in ambient temperatures up to 110° F.

Electric Shoe Shiner Can Be Installed In Office

ST. JAMES, Mo.—"Groomaster," an electric shoe shiner, manufactured here, has been designed to remove smudges, rain, or slush splashes from ordinarily well kept shoes, or to polish any shoe with the help of several applications of polish.

Suggested for use in commercial establishments as well as institutions and homes, the unit has been kept mechanically simple and needs only a few drops of oil once or twice a year for maintenance, according to the manufacturer. The motor is said to be the only moving part as the buffer mount and the buffer are driven directly from the motor.

The sheepskin buffer has been designed and located so that it will reach the hard-to-get-at spots, such as the instep, near the sole, and around ornamentation. Speed of the buffer is said to be one that will assure smooth, even polishing, the company claims.

'Groomaster' electric shoe shiner

Placed in entryways and vestibules, the Groomaster will greatly reduce the amount of soil and water carried into the building. Used in the home it will serve often when commercial shoe shine establishments are not handy or are closed. Children, according to the manufacturer, particularly enjoy operating the electric shiner.

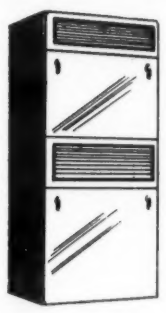
A solid walnut or cherry cabinet houses the mechanical unit, which operates on 110 or 115 volt a.c. Buffers, which the manufacturer says should last a year or more, are cleanable and replaceable.

A model suitable for mounting on a bench is available as well as the floor model.

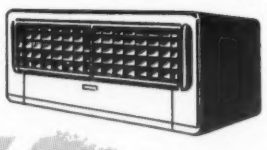
INTRODUCING...

Temp-Control's

COMPLETE AIR-CONDITIONING LINE For 1948...



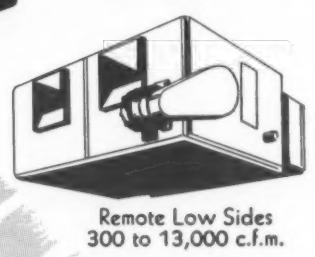
Self-Contained Hi-Boys 3 to 7½ tons



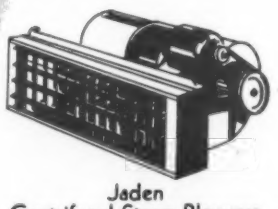
Jaden Water Conditioners ¾ to 15 tons

models for every need..

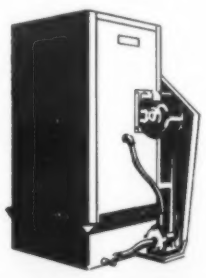
• REMOTE
• SELF-CONTAINED
• WATER
• MECHANICAL
• EVAPORATIVE-CONDENSORS



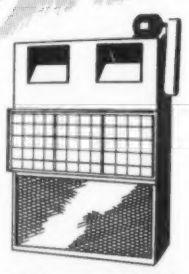
Remote Low Sides 300 to 13,000 c.f.m.



Jaden Centrifugal Steam Blowers



Evaporative Condensers 1 to 100 tons

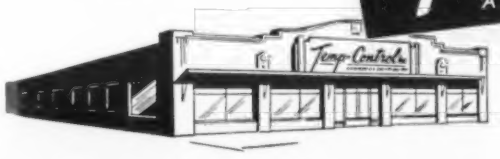


Self-Contained Lo-Boys 3 to 20 tons

DEALERS!

Choice territories are still open. Write now to —

Temp-Control Inc. A FINE NAME IN AIR-CONDITIONING



208-210 East State St.
Peoria, Illinois

52 WEEK SALES PLAN

UPS DEALER PROFITS

REFRIGERATORS – Revolutionary postwar models give up to 50% extra storage capacity–58% faster freezing.

RANGES – Brilliant 1948 Hotpoint models feature 11 outstanding improvements for greater convenience.

DISHWASHER–SINKS–Hotpoint Dishwasher washes, rinses and dries electrically . . . automatically!

AUTOMATIC WASHERS ...with matchless Thriftivator 3-zone washing action.

WATER HEATERS–With Hotpoint's sensational new MAGIC CIRCLE HEAT.

FLATPLATE IRONERS–Easiest-to-use automatic ironer on the market. Equal to 100 hand irons.

Everybody's Pointing To Hotpoint's Sensational 3-point Program That Boosts YEAR-ROUND Sales Of America's Fastest Growing Appliance Line!

Year-Round selling with outstanding line of fine products.

No dull seasons, no off weeks with Hotpoint's complete matched line. Hotpoint's 11 *major* appliances produce sales—and *big* ones—every week and month of the year. Hotpoint Refrigerators, Ranges, Dishwashers, Water Heaters, Kitchen and Laundry items mean year-round profit opportunities.

Year-Round supply—with greatly expanded production facilities.

Hotpoint spends and *builds!* $20,000,000 for new factories and equipment to keep a steady stream of Hotpoint appliances moving to Hotpoint dealers, for steady, all-year selling.

Year-Round advertising support—greatest in Hotpoint history.

Eight great campaigns in Hotpoint's gigantic 1948 advertising drive—plus complete, coordinated local promotion and sales training help—give powerful *year-round* backing to Hotpoint dealers' sales work. The 1948 drive is the greatest in Hotpoint history.

Everybody's pointing to Hotpoint—and Hotpoint dealers are pointing to year-round profits!

Copr. 1948 Hotpoint Inc., Chicago, Ill.

hotpoint

Hotpoint Inc. A General Electric Affiliate

THE FRANCHISE WITH A FUTURE

5600 W. Taylor St., Chicago 44, Ill.

Filtrine
HIGH EFFICIENCY
WATER COOLERS
INDUSTRIAL TYPE
CAFETERIA TYPE
GALLON FOR GALLON...YOUR BEST BUY!
For Cafeteria use . . . stainless steel cabinet models in all sizes. For Industrial use . . . variety of models for temperatures down to 34°
Several choice areas available for manufacturers' representatives.
FILTRINE MANUFACTURING CO.
53 Lexington Ave. Brooklyn 5, N. Y.
Manufacturers of Coolers & Filters for over 40 Years

Genuine
FACTORY REPLACEMENT PARTS
FOR
★ BRUNNER ★ COPELAND ★ COPELAMETIC
★ CHIEFTAIN ★ MILLS ★ JACK & HEINTZ
★ LEHIGH ★ UNIVERSAL COOLER ★ ★ ★
One Stop Supply Service • Complete Stocks • Fast Delivery
CHASE refrigeration supply co. NOT INC.
546 WEST 119TH ST., CHICAGO 28, ILL. - Phone PULiman 5125

Refrigeration Problems

And Their Solution

By P. B. Reed

For Service and Installation Engineers

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Cleaning Parts Before Repairing (5)

THE CLEANING SOLUTION

As previously mentioned, the usual cleaning solution has a strong alkali base, but instead of using commercial caustic soda or some similar chemical, it is recommended that one of the commercial compounds, such as Oakite No. 24 or Wyandotte Type WLG be used, for they contain some additional ingredients that make them more effective. Moreover they are quite inexpensive; the cost of the compound for 40 gallons of solution being less than $5.00.

These compounds are powders, and are obtainable in barrels containing about 125 to 140 pounds. They are obtainable in almost all of the large commercial cities.

The solution is made up of about one-half pound of the compound to a gallon of water. Thus a fresh tank of 40 gallons would use about 20 pounds of the Oakite No. 24 or Wyandotte WLG.

These materials do not "wear out" very rapidly, but the solution does get so dirty that, even if the solids are kept cleaned out as much as possible without emptying the tank, the solution will finally get so dirty that it should be drained, the tank cleaned and a new, clean tankful of solution made.

As long as the solution stays clean enough for use, it probably will not have to be changed, but from time to time, depending on how heavily it is used, three or four pounds of the compound may be added if the solution seems to be weakening, or if the level becomes low and water is added.

This type of solution is a cleaner and degreaser, suitable for washing compressors, or other iron or steel equipment. Brass and copper materials may also be cleaned in it.

DO NOT USE WITH WHITE METALS

Aluminum, zinc, galvanize or other white metals including die castings, should not be put in this solution.

Soldered joints will not be affected if they are not kept in the solution an excessive length of time. This solution is identical with that used in many radiator shops, so it can be seen that normally it can be used on condensers, coils, etc., having many soldered joints.

Compressors and most other assemblies should be capped and plugged before they are put in the solution, so that the solution will not get inside them. Motors, switches, and other equipment having electrical insulation should not be put in this solution, nor should belts.

SAFETY RULES

The solution is hot, and if there is any refrigerant inside, high pressures may burst the coil and throw scalding water over a workman.

Every compressor, coil, receiver, condenser, float valve, or any other closed vessel must be opened and blown out to be sure that there is no refrigerant in it.

Make sure that there is no refrigerant in the assembly. In doubt, such as with coils or condensers, blow them out with carbon dioxide.

It is better to empty the oil from the compressor before putting it in the solution. Refrigerant may be entrained in the oil. Besides, it will later be free of oil when the clean compressor is opened on the repair bench.

After the solution is as hot as 180° to 200°, the compressor may be put in. It should be allowed to stay in about 10 minutes, up to 15 or 20 minutes.

Until the serviceman gets used to using this type of cleaner, the material should not be kept in too long.

The condition of the compressor will determine how long it must be left in. If it is only a little greasy, and not very dirty, less than 10 minutes will be plenty. If it is very dirty and greasy it should be left in longer.

SOLUTION DOES NOT ATTACK IRON, BRASS, OR COPPER

There is no danger to the iron, brass, copper, etc., but gaskets, the seal, and possibly valve packing might be injured if exposed too long to the solution, so your rule should be to leave it in only long enough to serve the purpose and then take it out of the solution.

Experience will be your best guide on how to use the solution.

Of one thing you can be sure; this solution will really clean dirty, oily equipment, and do it quickly, safely, and without damage to the materials except as above indicated.

RINSE WITH TAP WATER AND HOT WATER

After the compressor has been in the solution as long as it needs to be, take it out and let it drain a bit over the tank. Then put it down on the floor between the two tanks and hose it off with ordinary tap water. Some men like to use hot water for this rinsing but it is not necessary, for ordinary tap water will do very well.

It will be found that some paints will become softened while in the solution, from the heat as well as from the action of the alkali. If the paint is thus softened, it may be washed off if it is hit by full city water pressure.

In some cities this water pressure may be enough to knock the loose paint off.

A. M. Palen of St. Paul, finds that he can remove the paint from most compressors and similar equipment by this method. He prefers to do so, for after repair and test, when the compressor is repainted, it has a good clean surface, free of old paint, grease and dirt, and takes a nice paint job.

It must be emphasized, however, that this type of solution is *not* a paint or varnish remover. It is primarily a grease solvent and cleaner, even though in some cases it does remove paint.

After it has been flushed off with the hose, the compressor is put into the hot water tank for about 5 to 10 minutes. There it completes its rinsing, but, equally important, it is heated again, so that when removed and blown off with compressed air it dries quickly. Therefore, there is little, if any, rusting effect from its cleaning with water solutions.

After it cools, it is ready to go to the repair bench to be disassembled for repair. It is clean and dry, and if the bench, tools, and the repairman's hands are as clean as they should be, a better and safer job can be done on the compressor.

RUST, LIME, AND CARBON REMOVAL

The foregoing cleaning liquids, both hydrocarbon solvents and alkali-water solutions, are most effective as grease solvents—agents for dissolving oils and greases in which dirt is in solution. To dissolve and remove these dirty oils and greases is the number one cleaning job in most repair shops.

Removing rust from iron or steel, softening and removing lime from condensers, water jackets, water valves, fittings, or iron pipe water or drain lines and softening and removing carbon deposits from flues, burners, compressor heads, valve plates, or similar parts, is not a simple cleaning job that can be done with a hydrocarbon solvent nor an ordinary alkali cleaner.

(Concluded on next page)

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Fig. 4. Setup for the Removal of Scale from Coils

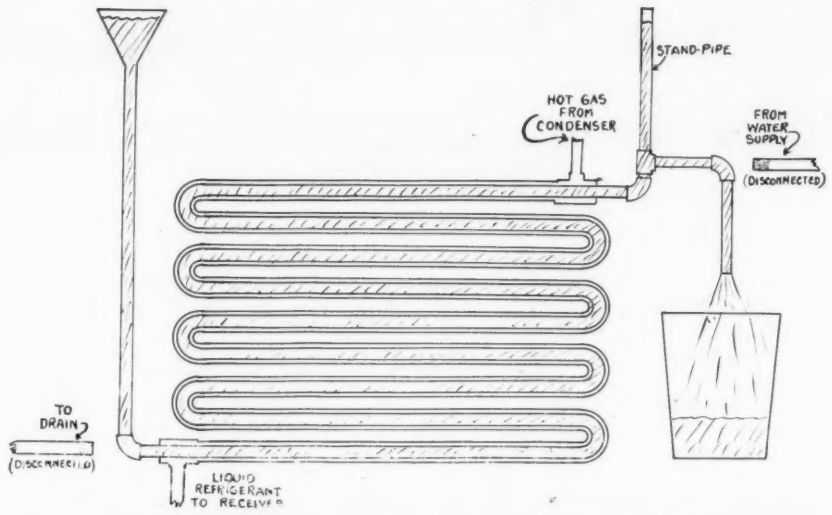

Fig. 4—Where a de-scaling solution is allowed to stand in refrigerant tubing, a standpipe should be installed in the drain line to permit the escape of the gas formed by the action of the solution on the scale.

Cleaning Parts--

(Continued from preceding page)

As a rule, acid solutions are used to soften and remove these incrustations. In past years it was common to find a solution of muriatic (hydrochloric) acid and water being used. One such solution was 25% muriatic acid, 75% water (one part muriatic acid mixed slowly into 3 parts of water). It may be used hot or cold.

This is a rather powerful solution and a good deal of care must be used with it. The workman should wear rubber gloves, a rubber apron, and rubber shoes. He must be careful not to splash this solution in his eyes or, in fact, on his bare skin. Preferably he should wear goggles if there is much chance of the acid being splashed, such as when parts may be immersed in it.

INHIBITORS

This solution attacks iron rust, the green discoloration (copper salts) that forms on brass or copper parts, lime and carbon, but it also attacks the metal itself; in fact, almost any acid will. So certain special chemicals, called "inhibitors" are put in acid solutions to cause them to attack the metal less actively, but still not affect very much the action of the acid solution on the incrustion that we want to soften, dissolve, and remove.

These inhibitors are made by various chemical manufacturers under their trade names. They are made in a number of types depending upon the kind of acid solution they are to be used in.

Rodine, made by the American Chemical Paint Co. at Ambler, Pa., is one of these inhibitors and Rodine No. 50 is the one to use with the above mentioned muriatic acid-water solution. They have others for other kinds of acid solutions.

The Grasselli Department of Du Pont also has a group of inhibitors for various uses. Their No. 3 or No. 8 may be used with muriatic or sulphuric acid solutions.

In late years phosphoric acid solutions have become quite popular because, not only are they effective but also they are less dangerous to use.

There are a number of companies who make a brand name acid solution of their own formula with the inhibitor already in it. Some of these come all mixed, ready to use; others are sold as full strength liquid, to be mixed with water to form the solution for use.

Nu-Coil, made by Skasol Corp., is a solution that is furnished as a liquid that is to be used as is without dilution. Oakite No. 32 is a strong liquid that must be mixed with two or three times as much water as the Oakite, to form the solution to use.

Peroline No. 2, of the American Chemical Paint Co., is intended primarily for cleaning and rust removal of the inside of steel evaporators, condensers, etc. It is used full-strength and is left in the evaporator over night. This solution has an oil base that prevents the material from rusting during transit or while in storage.

These solutions are usually used cold, that is at ordinary room temperatures, although they would be somewhat faster in their action if used warm.

USE NON-METALLIC CONTAINERS

Although the acid solutions have inhibitors in them to reduce the action of the acid on the metal and yet allow it full action on the rust, lime, etc., it must not be thought that the solution will not attack metal at all. They do, somewhat, so they should not be kept in metal containers.

The tanks or other containers for these acid solutions should be of crockery, glass, wood, or rubber or lined with vitreous porcelain or similar non-metallic covering.

The material to be de-scaled, may be immersed in a tank of the solution or in the case of the water-tubes, in a water-cooled condenser or equipment of similar construction in which the solution may be contained. It may be poured in and allowed to stand for a time or it may be circulated through the tubes from a container of the solution, by means of a small low-pressure type circulating pump.

In the method in which the solution is poured in and allowed to stand, a stand-pipe must be installed in the drain line to allow the escape of the gas formed by the action of the solution on the scale. Fig. 4 illustrates this method.

Bubbles rising from the solution in the stand-pipe shows that the solution is working. If the bubbles stop, the solution has quit working. This may mean (1) The scale has all been eaten out and dissolved in the solution or (2) The acid in the solution is all used up; that is, the solution has lost its strength.

To determine which has happened, drain the solution and mix into it about one pint of the strong acid and then put it back into the condenser. If it starts bubbling again, it shows that the solution had lost its strength. If it does not bubble, it shows that the scale or other incrustation is all eaten, so the solution may be removed and rinsing begun.

(To Be Continued)

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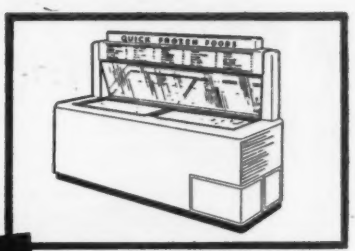
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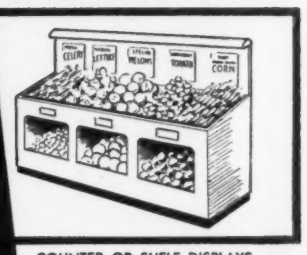
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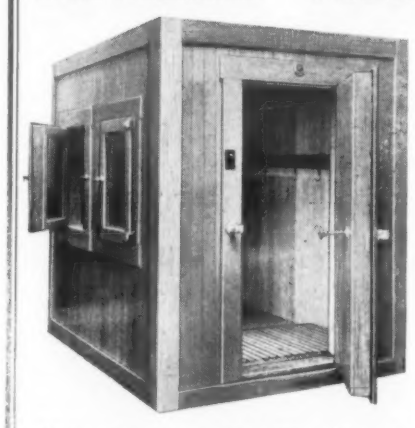

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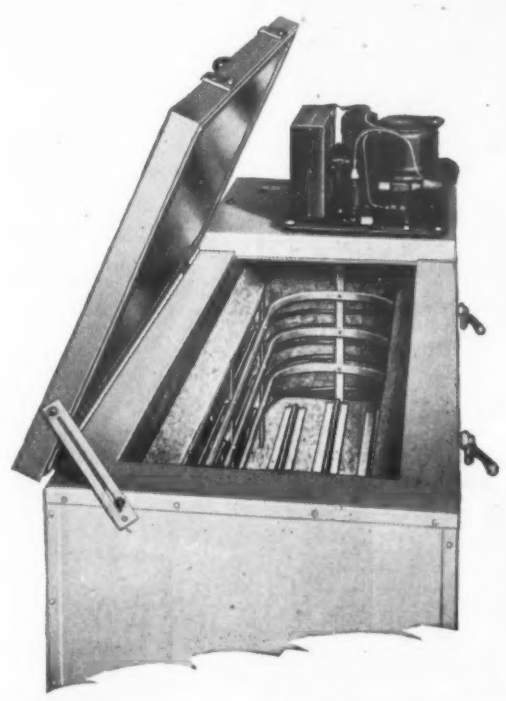

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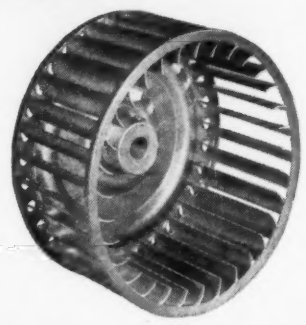

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They're Different, But:

Service Problems Not Overly Complicated On Multiple Stage Low Temperature Jobs

By C. Dale Mericle

CLEVELAND — Advantages and disadvantages of the two major types of multiple stage refrigeration systems—the compound and the cascade—were discussed in detail, and numerous suggestions on servicing such systems were presented at the tenth annual meeting of the Refrigeration Service Engineers Society here.

Thomas Lopiccola, chief engineer of the Refrigeration Division, Bowser, Inc., Terryville, Conn., which has done extensive low temperature work, was the speaker.

Needs of War Brought Temperatures Down

Briefly tracing the recent history of low temperature refrigeration work, Lopiccola pointed out that when the United States entered the war, the industry thought that -50° or -60° F. was the lowest practical temperature which could be obtained with mechanical refrigeration.

"In six months, however, we discovered that much lower temperatures were encountered in flights of military planes; as low as -120° F., even. It was then that multi-stage refrigeration came to the fore."

Extremely low temperatures had been produced in laboratories before then by the use of liquid air and dry ice, but these were rather expensive for the long tests that were needed for aircraft testing, he said. Even dry ice-alcohol combinations, which were successful in some respects, did not lend themselves to accurate control of the low temperatures they produced.

For temperatures as low as -50° F., the single stage machine has some advantages, the chief one being its simplicity, said Lopiccola. Refrigerants for it—"Freon-12" and "Freon-22"—are readily available, but one is limited to using either of these two.

Standard commercial condensing units can likewise be employed in single-stage low temperature applications, but the clearance between pistons and valve plate should be set at a minimum to keep up capacity, he explained.

Ordinary oil, however, cannot be used in low temperature work. Special low temperature oils must be used, and Lopiccola cautioned servicemen to always add the same oil to a low temperature machine that had originally been employed.

"Different low temperature oils don't mix well, and adding a different oil may cause trouble," he warned. "Also, don't forget to put oil in an oil separator when installing a new separator."

Oil Separators Advisable

Oil separators, he commented, are generally recommended for low temperature applications, and he further advised that hand valves be installed in the oil line between separator and compressor and likewise in the refrigerant line to make for easier servicing.

Oversize equipment has to be used in this single stage low temperature work, he also pointed out. A machine which will produce 10 tons at +40° will only put out 1 ton when operating at -40° back pressure.

"So you see," he said, "that it's best to size a job just a little on the large side to have a margin for proper capacity."

Turning to the discussion of multiple-stage hookups, Lopiccola first described the compound system. In this two or more compressors are employed, the gas discharge from the high temperature or the first machine being fed as the suction gas to the low temperature or second machine. This type of system also employs an inter-stage cooler and liquid sub-cooling.

"Such a system permits us to use 'Freon-12' or 'Freon-22' at a considerable advantage," he asserted.

One of the major problems, though, is obtaining a satisfactory oil which will have the proper characteristics to withstand the low temperatures encountered in the second machine and still not break down under the high temperatures (around 145° or 150°) in the discharge from the high temperature machine.

Oil coolers are sometimes used on large machines to minimize this difficulty, he said.

Equalizer lines are normally installed between the two compressors in a compound system, he explained. One is a gas equalizer line which is located above the crankcase oil level, and beneath this is the second line located sufficiently low to permit oil to flow between the two machines.

A three-stage self-contained compressor for compound systems was also described by Lopiccola. This is an eight-cylinder model with a five-two-one arrangement on a single crankcase which is economical to install and easy to service, he declared.

Single Machine Used In Compound Setup

"Freon-22" is recommended for this machine, which has the advantage of being able to maintain different temperatures if desired at different times. This machine has bypass arrangements, which can also be incorporated in compound systems using separate compressors, to permit using only one set of cylinders (or one compressor) for a given temperature higher than the minimum possible.

Other refrigerants often used for low temperature work, such as ethane or propane, can't be used in compound systems, said Lopiccola, but such systems have the advantage of having no temperature overlap be-

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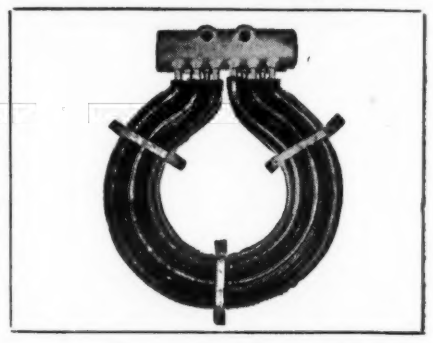

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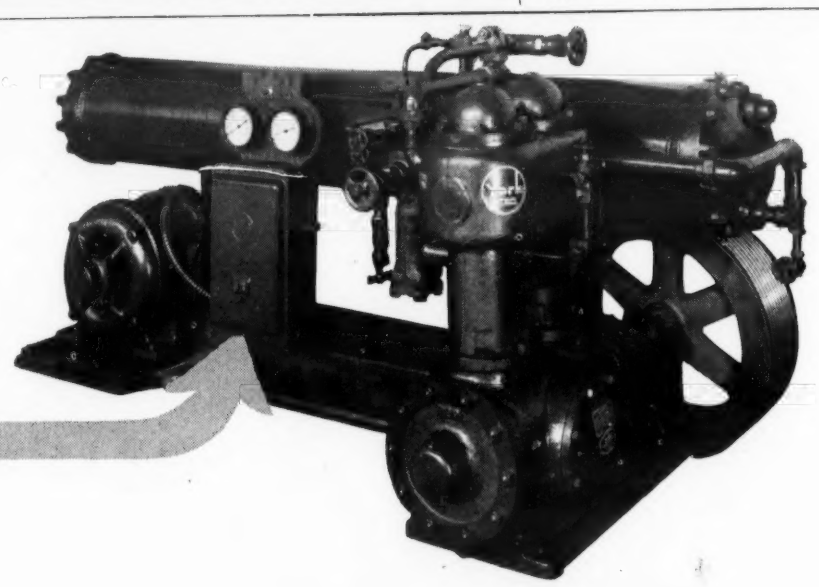

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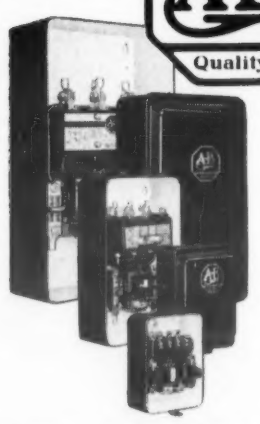

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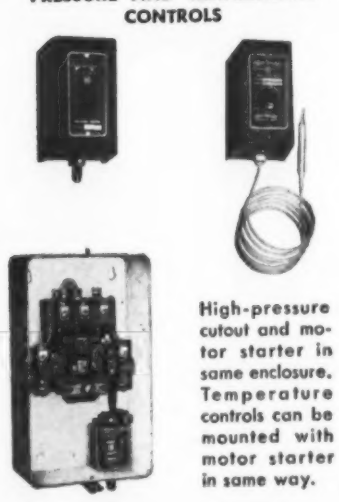

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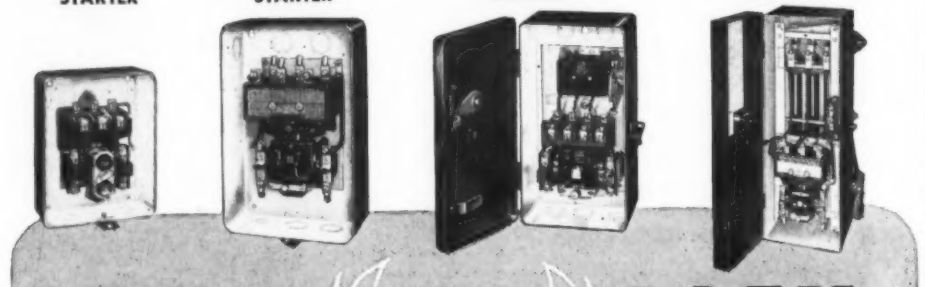

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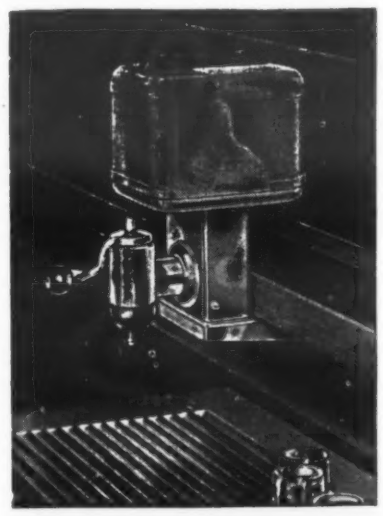

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Both 'Cascade' and 'Compound' Systems Possess Advantages and Disadvantages

(Concluded from preceding page)

tween the stages such as marks the cascade type system. Therefore, there is no loss of work in a compound system.

"Expansion valve ratings are changed considerably in compound systems," he continued. "There is an extreme pressure difference across the expansion valve, and while the capacity of an expansion valve normally increases with a greater pressure difference, the extreme low temperatures complicate matters.

"The low temperatures result in the expansion valve feeler bulb's having very little pressure. At low temperatures, it takes a big temperature change to open or close the valve. This can cause trouble.

"If in doubt as to what valve to install, don't put on an ordinary valve," he advised. "Even a valve charged with 'Freon-22" may not be good for a low temperature system using 'Freon-22' as the refrigerant. Valves for 'Freon-22' systems are usually charged with ethane or propane to get enough pressure at low temperatures."

Insert-type bulbs are also recommended for low temperature work.

Cascade System Employs Two Separate Circuits

Turning to the cascade type of multiple-stage refrigeration, Lopiccola pointed out that the two (or more) refrigerant circuits in the cascade hookup are entirely separate systems, and only come in direct relationship in the cascade condenser.

Explained simply, liquid refrigerant from the high temperature machine is allowed to evaporate in the cascade condenser, thereby condensing the discharge gas from the low temperature machine, which gas then goes to the final evaporator.

There are several advantages to this type of system as compared with the compound system, according to Lopiccola.

As far as each phase is concerned, the two (or more) stages of a cascade hookup are simple systems. Pressure levels in each stage can be kept at about normal by using different refrigerants. Expansion valves also operate under fairly normal pressure differences.

There is no oil transfer from one stage to the other, so different oils may be used in the high and low temperature stages, permitting the best one to be selected for each application.

Ethane and propane, which are often used as the low temperature refrigerant in a cascade system, are not miscible with oil, so there is apt to be less trouble with oil. Oil separators are usually included in cascade systems, however, he added.

And theoretically, any number of stages can be used with the cascade, he commented.

"One disadvantage of the cascade system, however, is the overlap of temperature in the cascade condenser. There must be a temperature difference of 10° to 20° in the cascade condenser. This subcooling on the high temperature stage represents lost refrigeration.

"We also have the cost of the cascade condenser itself, which we don't have with a compound system."

There is a danger, too, in the use of two different refrigerants, since a serviceman unfamiliar with the system might add the wrong refrigerant.

And then there is the problem of having a high pressure refrigerant like propane or ethane in the low stage in a room which is, say, 70° F., he pointed out. Ethane, for example, has a pressure of 560 lb. at 70° F., and could conceivably cause trouble if the machine is shut down or fails and the gas warms up to room temperature.

Charge Is Critical

This problem is usually solved by placing a critical charge of the low temperature refrigerant in the system so that even when the gas is 100% evaporated the total pressure on the system will be held at 250 lb. at 70° F. room temperatures.

One must be careful, though, in handling cylinders of these high pressure refrigerants, he added.

Inflexibility of controls is another characteristic of cascade systems, so they are best employed for constant temperature applications.

Commenting on multiple stage systems in general, Lopiccola stressed the extreme importance of removing every trace of moisture from a system. If any part of the system has been exposed to the atmosphere, seal the system and test for small leaks with a vacuum, after first using the conventional pressure tests, he said.

"Be careful, also, not to pump down a system too rapidly when dehydrating it, or moisture present in the system may freeze. And when charging with refrigerant, charge through a dehydrator. Leave the dehydrator in the system during during moisture tests, and then take it out."

Permanent installation of a dehydrator if a by-pass arrangement is provided was also recommended by Lopiccola.

He advised that suction lines be carefully selected to assure minimum pressure drop, and long lines should be avoided.

"But don't make the lines too large or the refrigerant won't have enough velocity to return any oil."

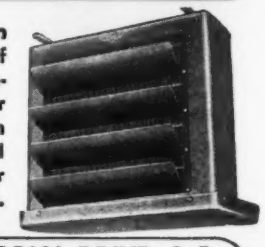
Distributor Host To Norge Service Conclave

NEWARK, N. J. — The regional meeting of Norge eastern distributors' service departments was held last month at the Krich-Radisco, Inc. auditorium here, presided over by Thurlo Johnson, Norge national service director.

The meeting was held to acquaint the distributors with the latest Norge products, and to outline in detail the factory's general service policies, in order to effect a greater mutual understanding.

FASHIONED FOR FUNCTIONING

Even the handsome, engineered *good looks* of Larkin refrigeration products contribute to their fine performance. The originator of the Cross Fin Coil also offers you matchless quality In Air Conditioning Units—Evaporative Condensers—Instantaneous Water Coolers—Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—and complete equipment for commercial and industrial refrigeration.



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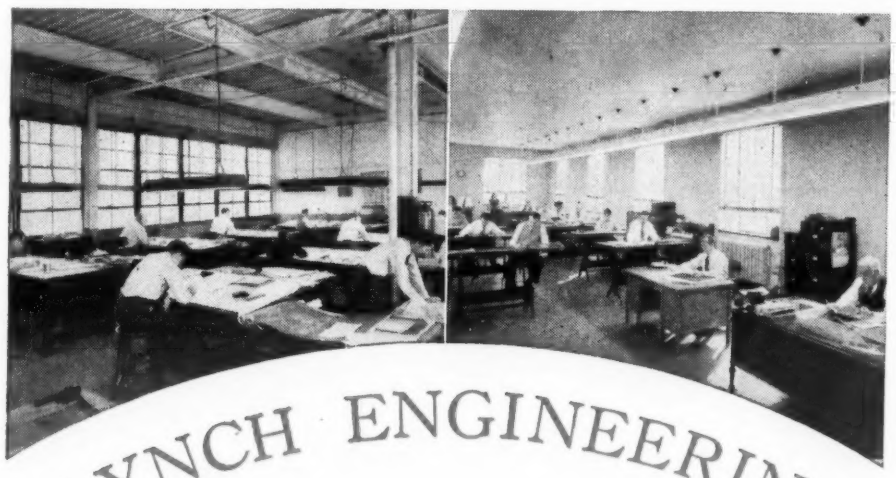

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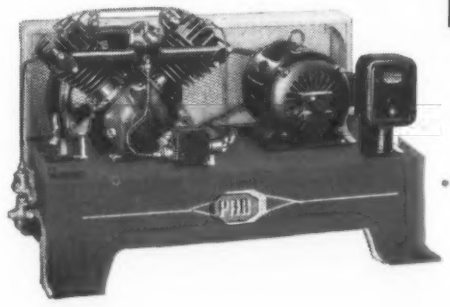

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Par Compressor Division TOLEDO 1, OHIO U.S.A.

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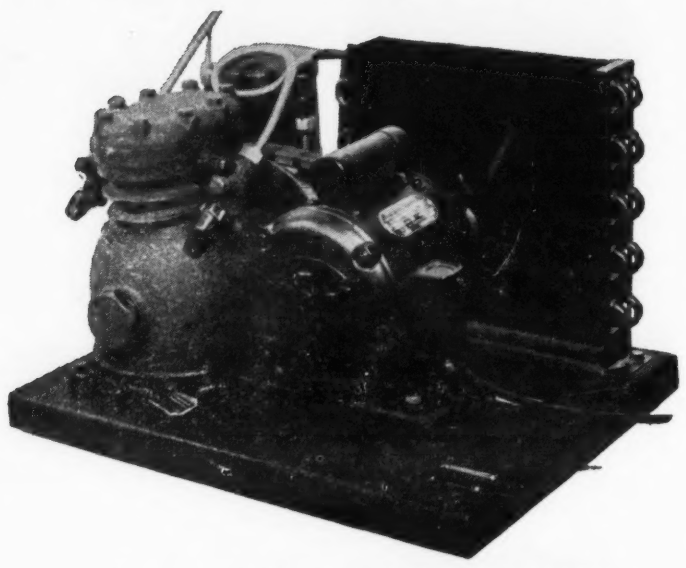

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One of a series from

The KEY to AIR CONDITIONING

by James J. LaSalvia

Sheet Metal Ducts (Cont.)

EFFICIENCY OF DUCTS

Sheet metal ducts are made in round or rectangular shapes.

The round duct is the most efficient duct for airflow, as there are no corners and all of its area is utilized in carrying air.

Rectangular ducts are chiefly used, however, because they will conform to the building structure much better than the round ducts. Only in special cases should round ducts be used.

The rectangular duct, while it is mostly used, is not as efficient on account of the corners, which become dead spaces. It is obvious then in rectangular ducts, that the most efficient one to use would be the square type, if possible. But the square duct cannot be used in all cases as the building structure would not permit it for good practice.

Therefore, the rectangular type is chiefly used as it will permit the best possible means of fitting to a structure.

In using rectangular ducts one must consider certain ratios of width to height in order to secure the greatest efficiency in resistance, cost, and installation.

In practice it has been found that ducts in the ratio of 2 to 1, width to height, are the most efficient. A ratio of greater than 3 to 1 should not be used unless absolutely necessary.

GENERAL EQUATION FOR SIZING DUCTS

In all ductwork design the following formula is used for sizing of ducts:

$$A = \frac{\text{C.f.m.}}{V} \text{ or,}$$

$$V = \frac{\text{C.f.m.}}{A} \text{ or,}$$

$$\text{C.f.m.} = A \times V.$$

Where: A = Cross sectional area in square feet.
C.f.m. = Volume of air flowing through duct in cubic feet per minute.
V = Velocity of the air in feet per minute.

Knowing the area of the duct in square feet, it is then reduced to square inches. The sides of the duct are then figured in inches to give the same area or an area as close to it as possible.

EXAMPLE

What is the size of duct to carry 1,500 c.f.m. at a velocity of 500 f.p.m.?

$$A = \frac{\text{C.f.m.}}{V} = \frac{1{,}500}{500} = 3 \text{ sq. ft.}$$

A = 3 sq. ft.
A = 3 sq. ft. x 144 sq. in.
A = 432 sq. in.

Any one of the following sizes may be used:

Sizes (Inches)	Area In Sq. In.
21 x 21	441
22 x 20	440
23 x 19	437
24 x 18	432
26 x 17	442
27 x 16	432
29 x 15	435
31 x 14	434
33 x 13	429
36 x 12	432

Any of the above sizes would be recommended to meet the problem. Flatter ducts should not be used.

The above method of sizing is recommended for the velocity method only. When ducts to be used are flatter than those shown above, use the equal friction method.

GAUGES OF DUCTS

Sheet metal ducts are made of galvanized mild steel sheets. It is customary to use lighter material on smaller dimension ducts, and thicker material on larger ducts. It is necessary to use a thickness which has been proven satisfactory in practice in order that the ducts will not sag and that noises in ducts which may occur due to the air velocity may be eliminated. These gauges are as follows:

Round Ducts	Rectangular Ducts (Use longest side)	Gauge (U. S. Standard)
6 in. to 19 in.	4 in. to 18 in.	26
20 in. to 29 in.	19 in. to 30 in.	24
30 in. to 39 in.	31 in. to 60 in.	22
40 in. & above	61 in. & above	20 and 1 in. x ⅛ in. bar stiffener every 4 ft.
Casings up to 5 ft. high		18 and angle stiffeners.
Casings higher than 5 ft.		16 and angle stiffeners.

(To Be Continued)

Various Elements of Ductwork Are Shown In Detail

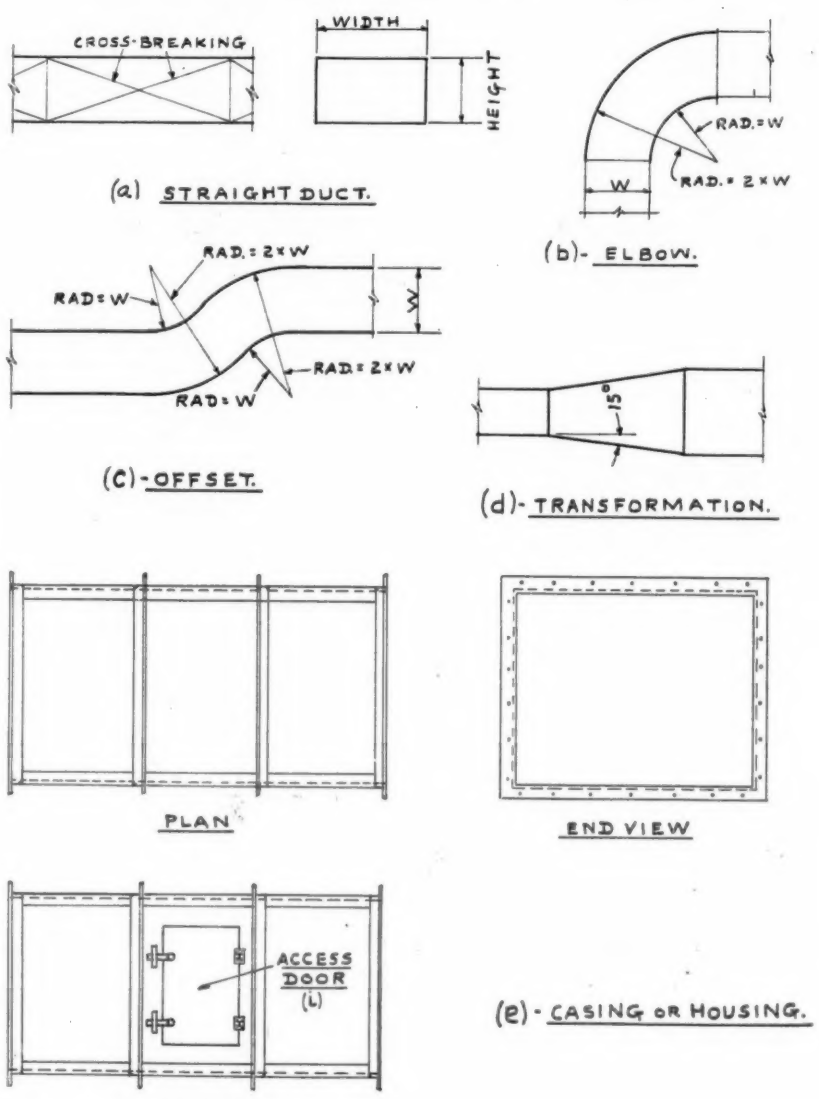

Fig. 2 shows how some formulas for figuring ductwork are obtained.

Check your liquid line . . .

See for yourself . . . **THROUGH THE MUELLER**

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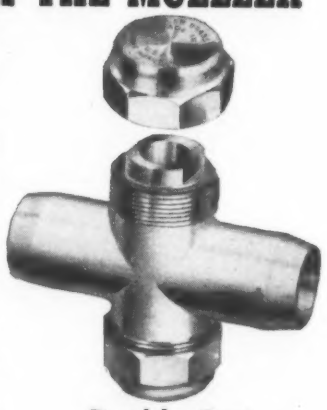
"THE BUBBLES WILL TELL YOU WHEN THE LIQUID IS LOW"



Double Port Liquid Indicator

The improved design of our liquid indicators is effective assurance against refrigerant leakage around the sight glass. The sight glass is sealed into the forged brass body by a heavy Neoprene gasket which, in turn, is compressed by a packing gland, which forces the pliable gasket along the sides of the glass and produces a perfect seal.

Mueller Brass Co. Liquid Indicators are made in a complete range of styles and sizes. The seal cap type may be installed where light conditions are favorable. Where the light is poor, we recommend the use of our double port liquid indicators illustrated here. By flashing a light through one port, the exact condition of the refrigerant may be determined through the other port.

The new design of the compression gland permits the use of standard wrenches for tightening.

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Canadian Refrigerator Group Meets--

(Concluded from Page 1, Column 4)

places of entertainment, amusement, or recreation.

In outlining the excise tax situation, the chairman urged all members to use the Government-approved certificate on end use of equipment and to check all their distributors and dealers to make sure they are adhering to rulings.

(Use of the certificate was approved—and clarification of excise-tax rulings effected—after conferences between CRMA members and Government officials. Disposition of equipment is certified on the form by dealers or distributors. It is then the manufacturers' responsibility to decide whether the tax should be applied or not.)

Some discussion took place regarding application of the tax to equipment installed in hospitals and old people's homes. It was pointed out that all hospitals, except those provincially owned, are eligible on domestic equipment installed.

The association was informed that a committee on excise tax has been formed to study the existing situation. The committee has been empowered to make further representations to the Government.

A report on the progress made with regard to legislation for providing training for refrigeration apprentices was presented by Lock. He said an advisory committee was being set up and that the association had been asked to supply representatives to it.

During the discussion of the safety code, members were advised that the matter is being handled by a committee under R. A. Stencel, of Canadian Ice Machine Co., Ltd.

At the banquet, retiring president Heilig outlined the growth of the association from its original position as an advisory committee to its present status. He reported the CRMA now has 43 members and 10 associate members. He commended those firms which are submitting statistics on commercial refrigeration but deplored the lack of statistics from fixture manufacturers.

The following members were appointed chairmen of the committees indicated at a meeting of the new board of directors held shortly after the convention: Smallwood, Canadian National Exhibition and apprenticeship; Gordon Wishart, of Canadian Ice Machine, public relations; Crysdale, excise and sales tax; and Hedrich, warranty.

Other members of the exhibition committee are T. Martin, of Universal Cooler; Marshall Lock, of J. H. Lock & Sons; and W. W. Miller, of Frigidaire Products. The warranty committee will be composed of members from the ammonia, low pressure, and fixture groups.

Excise Tax Hits Sales, Says Canadian Group

KITCHENER, Ontario, Can. — A strongly-worded resolution protesting that the 25% excise tax on major electrical appliances is forcing customers to cancel orders and thus endangering the whole industry was to be drafted at the March meeting of the Kitchener and Waterloo branch of the Ontario Association of Radio and Retail Appliance Dealers.

The resolution will be presented at the annual meeting of the association in Hamilton, Ontario, April 12 and 13, according to A. L. Sauder, president of the branch. He said the resolution will ask that a representative delegation, including manufacturers, call on Finance Minister Douglas C. Abbott, requesting abolition of the tax in the 1948 budget.

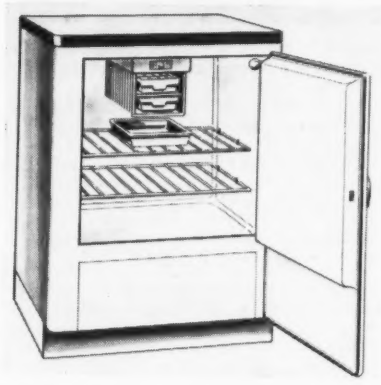
Sauder claimed the tax, imposed last November as a part of a program designed to conserve Canada's rapidly-diminishing assets of U. S. dollars, has seriously decreased appliance sales. Sales resistance, he declared, is already being felt.

Many customers who planned to purchase refrigerators have cancelled their orders because they refuse to pay the tax, Sauder asserted.

"In most instances it has meant an extra $75 to $85 to the customer and they have refused to take the refrigerator at that extra boost," he said. "The new tax has certainly complicated the selling end of the major appliance business and it has taken us just this long to find it out."

He explained that cancellations are just beginning to show up because electric refrigerators are only now starting to come from manufacturers.

New Household Unit



This 3½-cu. ft. "Jordonette" table-top household refrigerator model will be introduced to the field April 1 by the Jordon Refrigerator Co. of Philadelphia.

* * *

Table-Top Model--

(Concluded from Page 1, Column 5)

Dulux enamel. The unit is powered by a ⅛-hp. hermetically sealed compressor.

The normal temperature model is equipped with an interior light, two full width wire shelves, a small wire shelf, and two ice cube trays.

The ice cube maker model contains five rows of four trays each. The low temperature model is intended for frozen food storage.

Especially designed for small apartments, trailers, doctor's offices, pharmacies, or for homes that need an extra small refrigerator, the Jordonette will be merchandised through Jordon dealers and distributors both in this country and abroad, according to Levin.

284,726 Household Refrigerators Sold by Nema Firms In January

ELECTRIC HOUSEHOLD REFRIGERATORS

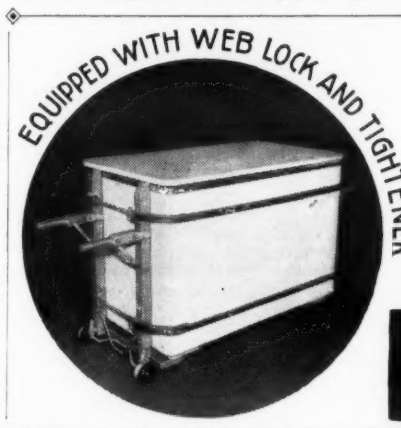
Complete Refrigerators Only

(Lacquer and Porcelain Exterior Cabinets) (Advertised Sizes)

JANUARY

	Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1.	Less than 4 cu. ft.	225	....	....	225
2.	4 cu. ft.	562	....	....	562
3.	5 cu. ft.	....	....	....	....
4.	6 cu. ft.	22,339	....	1,705	24,044
5.	7 cu. ft.	137,345	1	9,742	147,088
6.	8 cu. ft.	41,101	66	660	41,827
7.	9 and 10 cu. ft.	63,636	1	430	64,067
8.	11 and 12 cu. ft.	6,913	....	....	6,913
9.	13 cu. ft. and up	....	....	....	....
10.	**Total**	**272,121**	**68**	**12,537**	**284,726**

Participating companies: Admiral Corp.; Crosley Div., AVCO Mfg. Corp.; The Coolerator Co.; Hotpoint, Inc.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Nash-Kelvinator Corp.; Norge Div., Borg-Warner Corp.; Seeger Refrigerator Co.; Westinghouse Electric Corp.



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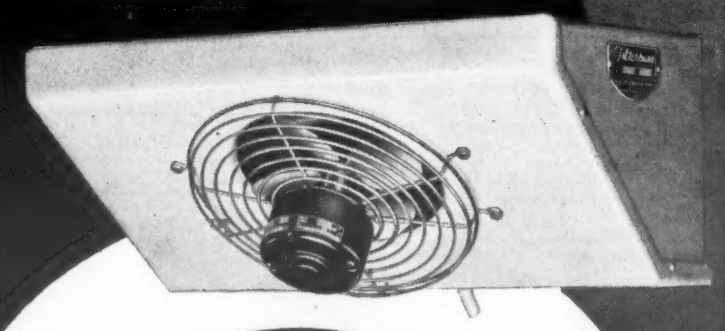

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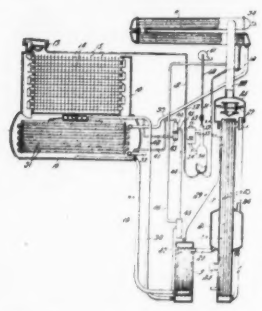
Sold by Leading Refrigeration Wholesalers

BETZ CORPORATION
HAMMOND • INDIANA

PATENTS

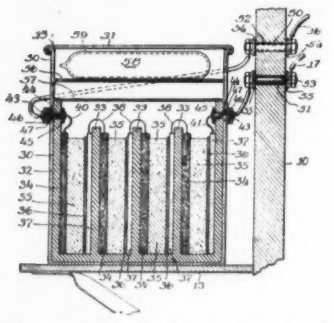
Week of December 23

2,432,978. GAS PURGER AND SOLUTION REGULATOR IN VACUUM TYPE ABSORPTION REFRIGERATING APPARATUS. Philip P. Anderson, Jr., Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application June 10, 1944, Serial No. 539,610. 15 Claims. (Cl. 62—119.)



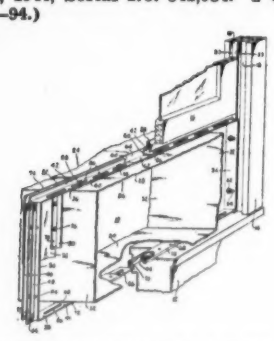
1. The method of controlling the concentration of absorption solution in a closed absorption refrigeration system operating in a partial vacuum which comprises circulating refrigerant through the system, diverting liquid refrigerant from its path of flow through the system and storing it to produce a predetermined concentration of the absorption solution, and transferring the stored refrigerant to cause it to flow through the system when non-condensible gases occur therein.

2,433,024. FREEZER ALARM AND MEANS FOR ENERGIZING SAME. Jackson Burgess, Glencoe, Ill., assignor, by mesne assignments, to Burgess Battery Co., Freeport, Ill., a corporation of Delaware. Application April 27, 1945, Serial No. 590,621. 14 Claims. (Cl. 177—311.)



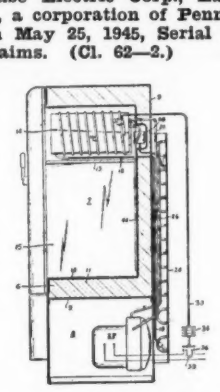
1. Means for energizing a work circuit upon rise of temperature to a predetermined value up to 32° F., comprising a substantially closed container, a deferred action battery in said container, a frangible envelope in said container, an aqueous activating composition in said frangible envelope and adapted to rupture said envelope upon freezing, said activating composition having a melting point of approximately said predetermined temperature, means in said container for retaining said activating composition following melting thereof after rupture of said frangible envelope, said retaining means being adapted to release said composition for passage to said battery upon accumulation of a quantity thereof by said retaining means.

2,433,104. AIR CONDITIONING APPARATUS. Arthur H. Eberhart, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application June 24, 1944, Serial No. 541,984. 2 Claims. (Cl. 98—94.)



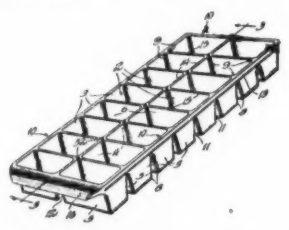
1. Means for mounting an air conditioning unit casing or other enclosure having vertical side walls and a horizontal top wall, in a window having jambs and a sash movable vertically in sash grooves formed in said jambs, said means comprising brackets including vertical portions adapted to engage said grooves and horizontal portions adapted to be secured to said top wall, vertical flanges carried by and coextensive with said horizontal portions, the total length of said horizontal portions being such that, when said vertical portions engage said grooves, a gap is left between the juxtaposed ends of said horizontal portions, a vertical flange carried by the top of said casing and abutting against the vertical flanges of said horizontal portions to close said gap, the vertical flange carried by the top of said casing being higher than the flanges carried by said horizontal portions, and a gasket extending substantially the width of the window opening, said gasket having a lower relatively wide slot for engaging the abutting portions of said flanges and an upper relatively narrow slot adapted to engage the upper portion of the flange carried by said casing.

2,433,187. CONTROLLED REFRIGERATING APPARATUS WITH SECONDARY REFRIGERATING CIRCUIT. Carl F. Alsing, Wilbraham, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application May 25, 1945, Serial No. 595,810. 11 Claims. (Cl. 62—2.)



2. In a refrigerator comprising a thermally-insulated food storage chamber, a primary cooling means maintained at a constant average temperature for cooling a portion of said chamber, a secondary volatile refrigerant circuit having an evaporative portion for cooling another portion of said food storage chamber and a condensing portion in heat-transfer relationship with said primary cooling means, the combination with said refrigerator of a control for said secondary circuit, said control comprising a tank in said circuit located below the condensing portion to receive liquid refrigerant therefrom, an opening in said tank spaced from the bottom thereof and communicating with said evaporative portion to drain liquid refrigerant into said portion, said control including a thermostat in heat-transfer relationship with an element which varies in temperature responsive to the ambient temperature of said chamber for decreasing the volume of said tank below the level of said opening when said ambient temperature increases and for increasing said volume when said ambient temperature decreases.

2,433,210. ICE CUBE TRAY. Joseph A. Gits, Chicago, Ill, assignor of one-half to Jules P. Gits, Chicago, Ill. Application Feb. 2, 1945, Serial No. 575,798. 14 Claims. (Cl. 62—108.5.)



12. A freezing tray comprising compartments each composed of upwardly tapered side walls and a bottom wall and all of flexible thermoplastic material to which ice and frost will not adhere, side walls of each compartment integrally joining side walls of adjacent compartments at their upper edges to form a continuous cell-like body made entirely of said flexible thermoplastic material, said walls of adjacent compartments being spaced from each other on all sides by said tapered formation and being form-sustaining when said compartments are filled with liquid, the top portions of said compartments where said walls are joined cooperating to produce a formation that will transmit an endwise torsional twist of the tray through all of said walls to distort the normal shape cross sectionally of each compartment whereby to loosen frozen material in each compartment.

(To Be Continued)

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ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS WANTED

DO YOU have a help problem? Let us solve yours. Available—well trained selective men. These men have completed a course of 34 weeks consisting of practical shop refrigeration. Send for our records. Well trained men for a good job. Available for all parts of the country. THE ST. LOUIS SCHOOL FOR ELECTRICITY AND REFRIGERATION, INC., 6767 Southwest Avenue, St. Louis, 17, Mo.

POSITION WANTED as service representative, with manufacture of heat pump and air conditioning equipment. 20 yrs. of mechanical background, 10 of these in the refrigeration field. 3 yrs. operating my own business. 3 yrs. research work with heat pump. Studied mechanical engineering, and have a broad education. BOX 2718 Air Conditioning & Refrigeration News.

MANUFACTURERS REPRESENTATIVE thoroughly familiar with New York and New Jersey metropolitan area. Favorably known by jobbers, distributors and dealers of air conditioning and refrigeration equipment. Can insure competent and aggressive representation. BOX 2719 Air Condition ng & Refrigeration News.

AMBITIOUS YOUNG man, 10 years experience in refrigeration field; service, sales, group instruction desires permanent position as factory service representative, service manager, sales representative, educational director. Thoroughly familiar with all types of equipment. Married, own new automobile, free to travel. Available 30 days. Best references. BOX 2723 Air Conditioning & Refrigeration News.

AIR CONDITIONING and refrigeration engineer—BSEE General Electric training; six years experience on design, sales and installation of "Freon" equipment; have organized and supervised service department of large appliance dealer. Now chief engineer of General Electric distributor, but desire similar position in the Los Angeles area. Excellent references. BOX 2724 Air Conditioning & Refrigeration News.

SALES ENGINEER, air conditioning, refrigeration and heating. Many years experience in engineering, sales and service. Employed at the present time, but desire change. Prefer South or Southwest. Will accept position anywhere with well established manufacturer, distributor or dealer. BOX 2734 Air Conditioning & Refrigeration News.

APPLICATION ENGINEER: Thoroughly experienced in development—layout—erection and operation of commercial and industrial refrigeration equipment and insulation. Specialty, low temperature work. Desires change in location. References furnished. BOX 2735 Air Conditioning & Refrigeration News.

REFRIGERATING SALES Executive available, comprehensive background of dealer relations, retail sales, application engineering, market equipment, modernized layouts and design, unitized air conditioners, purchasing and expediting. Vicinity New York City, New Jersey or New England. Consider manufacturers' representative. Age 33. BOX 2736 Air Conditioning & Refrigeration News.

MANUFACTURER'S AGENT: Salesman covering Pennsylvania, Ohio, Illinois, N. Y., N. J. and New England on commercial frozen food cabinets wants additional allied lines for sale to refrigeration and store fixture dealers, distributors and jobbers. Have excellent contact with the leading and active commercial outlets in the territory. BOX 2738 Air Conditioning & Refrigeration News.

POSITION WANTED: Sales Manager or representative with extensive and varied experience in estimating, sales, layouts and installation of refrigerating, power plant, dairy and ice cream machinery and plants, desires permanent connection with reliable and established firm. Will consider domestic or foreign assignment. BOX 2740 Air Conditioning & Refrigeration News.

SERVICE MANAGER now employed as lecture instructor in leading refrigeration trade school. Complete knowledge domestic and commercial refrigeration service and installation, all applications. Sales minded. Capable of setting up and operating a paying organization. Will correspond on your problems and requirements. BOX 2742 Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

COMMERCIAL AND industrial refrigeration and air conditioning installation and servicemen with at least 3 years experience. 40 hour week, company trucks furnished. $1.80 to $2.00 scale. DRESCO REFRIGERATION COMPANY, 4404 Woodward, Detroit 1, Michigan.

FACTORY REPRESENTATIVES wanted by manufacturer of nationally advertised line of Electric Water coolers. Choice territories available. Write stating qualifications, dealer and distributor contacts. BOX 2737 Air Conditioning & Refrigeration News.

SERVICE MANAGER — For aggressive sales and service company located in Northern Ohio. Service Department personnel consists of 20 people. This is a permanent position with unlimited possibilities. Requires a manager well qualified to supply mechanical information and organize office and service procedures. State previous experience, when personal interview may be arranged in first letter. Unless you can qualify for a $7,000 to $8,000 position, please do not reply. BOX 2674 Air Conditioning & Refrigeration News.

DRAFTSMAN WANTED: Layout and detail drafting on sheet metal cabinets. Experience with refrigerators, store fixtures, freezer cabinets, etc. helpful. Pleasant working and living conditions, small town near city. Modern factory. Well established business. Opportunity for salary advancement. Location Northern Indiana. Give experience, employment record, age, in first letter. BOX 2706 Air Conditioning & Refrigeration News.

EXCELLENT OPPORTUNITY for sales agent or manufacturer's representative calling on the refrigeration trade—standard exclusive items—commercial refrigeration. Patent pending, low-priced efficient beer equipment—: each-ins, storage boxes. Represent us exclusively or as additional, non-conflicting items to your line. BOX 2712 Air Conditioning & Refrigeration News.

SALES ENGINEER—To establish dealer relationships, Eastern Seaboard States. Small eastern firm manufacturing high quality line sectional walk-in coolers, Freezing rooms, dual-temperature rooms, cold storage doors. Prefer Engineer currently contacting refrigeration dealers as an independent, in position to carry this line in addition to others. Lucrative offer. Broad territory. General experience and qualifications first response. BOX 2725 Air Conditioning & Refrigeration News.

GOOD OPPORTUNITY for young man with at least three years experience in general advertising. Must be able to handle production on catalog and miscellaneous bulletins, also write condensed copy for same. Prefer man with some knowledge of refrigeration, heating, air conditioning. Starting salary, $75 weekly. BOX 2741 Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

3'6" by 7'2" YORK track doors. 4" cork insulation, left hand swing @ $80.00 ea. 3'6" by 7'2" York double batten, automatic close, track doors, 1½" cork board insulation, @ $75.00 ea. All new in original factory crates. THE BIMEL COMPANY, 2600 Colerain Avenue, Cincinnati 14, Ohio.

350 TEN POUND new steel refrigerant gas cylinders with heavy duty Kerotest valves and safety fuse, I.C.C. stamp 4-47. $5.75 each. FOB Chicago. BRIDGEPORT REFRIGERATION SALES AND SERVICE, 2916 Archer Avenue, Chicago 8, Illinois.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed) Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 16640 Log Cabin, Detroit 3, Mich.

AVAILABLE for immediate shipment new Seeger reach-in refrigerators in original factory crates. (Limited quantities). Model SCD-30 (30 cu. ft.) with blower coil. Model SCDM-30 (30 cu. ft) with ice maker coil. Complete with hermetic Kelvinator compressors assembled.—Ready to operate. Competitive list prices—Liberal dealer discounts. Write for prices and complete details. W. J. CONNERS—Suite 406. 540 North Lake Shore Drive, Chicago 11, Illinois.

NEW GENERAL Electric motors, 1½ HP. 1800 R.P.M. 230 volts 1 Ph. 60 cycle. High starting torque. Constant duty sleeve bearing. List $88 less 20%. Also in stock ⅛ to 1 HP. EDISON COOLING CORP., 310 East 149th St., New York City, N. Y.

QUALITY BOBTAIL fountains; reach-ins walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16. MA 2-9093.

FOR SALE at reduced prices, 2-tap all stainless steel direct draw boxes complete with blowercoil $275 F.O.B. Chicago, Illinois. 3-tap all stainless steel direct draw boxes complete $340. GEORGE HILGER CO. INC., 8444 So. Racine, Chicago, Illinois.

TUBING 592 ft. ⅝" OD x .028 wall x 16 ft. lengths. Type L nickle Bundyweld. 2000 ft. ⅝" OD x .028 wall x 16 ft. lengths. Type 304 stainless steel. Bargain. Immediate delivery. IDEAL COOLER CORP., 2953 Easton Avenue, St. Louis, Missouri.

FOR SALE two (2) 5 ton second hand Chrysler high and low sides air conditioners complete. Bids acceptable at the KOOLERAIRE CONDITIONING COMPANY, 55 West 42nd Street, New York, N. Y.

GOVERNMENT SURPLUS: Large quantity Alco solenoid valves S1N15 ⅜" O.D.S. 115 V. DC or 220 V. AC. All new and in original sealed containers . . . $2.75 each. NANTICOKE REFRIGERATOR MANUFACTURERS, Nanticoke, Pennsylvania.

BARGAIN: We have 3502 15" x 20" x 2" #2 "Duststop" filters which were war surplus. Completely new and are in original cartons. Being billed at forty (40¢) cents each f.o.b. Fort Smith, Arkansas. NEISLAR REFRIGERATION & AIR CONDITIONING COMPANY, 221 Garrison Avenue, Fort Smith, Arkansas.

JACK & HEINTZ fractional horsepower motors. Complete line of various sizes: ⅛, ¼, ⅓, ½-110/220 AC 60 cycles; 115/230 AC 50 cycles. Available for immediate delivery. Maximum discounts. Export Dept., S. J. O'BRIEN SALES CORP., 560 West 34th Street, New York 1, N. Y. Telephone WI. 7-2100.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools required. Corrects leaky terminals on F-12 units. Short model 1020- for short Crosley terminals (F-12 compressors with 4 mounting legs). Long model 1020- for long Crosley terminals (F-12 compressors with 3 mounting legs). $5.25 set of three. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Avenue, New York 56, N. Y.

COMPLETE SEALED units ⅛ H.P. for sale. Condensers are fan cooled. Complete with relay and charging valves $45.00. Lots of 10, $40.00 each. F.O.B. New York. Dimensions are 15¾" long, 14½" wide, 11" high. TECHNICAL REFRIGERATION SPECIALIST'S, 362 East 180th Street, Bronx, N. Y.

IMMEDIATE DELIVERY from stock, FOB New York, new Delco fractional and integral motors; ¼ HP. 17.92; ⅓—24.16; ½—37.08; ¾—47.48; 1 HP—61.60. Complete stock of Delco industrial motors. WHOLESALE DISTRIBUTORS, INC., 150-19 Liberty Avenue, Jamaica 4, N. Y. JAmaica 6-1733.

3 HP. CARRIERS $310; 5 HP. Mills $395; 50 HP. Schnacke less motor $1195. The following less motors, ¼ HP. Copelands $39; ⅓ HP. Universal $49; ½ HP. Crew $49; 5 HP. McQuay & Typhoon Weathermakers $395; ¾ and 1 HP. Amco $175 & $195; 15 HP. Larkin evaporative condenser $795. All new crated. BOX 2689 Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

NORTH GEORGIA locker plant, 580 lockers. Complete chilling, ageing, storage, and curing facilities. 170 meat bins. Nice ice cream trade does $18,000 volume of business per year. Excellent opportunity and space available for large supermarket. City of 6,000 with large country trade. Meat market well established. Frozen Food sales going well in Hussmann self-service cabinets. This plant is in the business section and has an excellent reputation, paying an excellent profit each year. Requires $21,000 to handle with balance to be assumed. For further information write MR. OLIVER MANNING, 1827 Shawnee Avenue, Memphis, Tennessee.

YORK-SHIPLEY
AMMONIA COMPRESSORS
100—150—200 TON

- **100 Ton Ammonia Compressors, Synchronous motor, 60 cycle, 203 amps, 440 volts, 190 H.P. output, 164 rpm. Weight without trim, 65,000 lbs.**
- **150 Ton Ammonia Compressors, Synchronous motor, 60 cycle, 282 amps, 440 volts, 265 H.P. output, 164 rpm. Weight without trim, 80,000 lbs.**
- **200 Ton Ammonia Compressors, Synchronous motor, 60 cycle, 328 amps, 440 volts, 300 H.P. output, 120 rpm. Weight without trim, 104,000 lbs.**

In good working order. Can be seen at Factory. F.O.B. Long Island City, N. Y. Write or call R. R. Lacey

LOFT CANDY CORPORATION
LONG ISLAND CITY, N. Y.

FOR SALE

Refrigeration and Air Conditioning Sales Distributorship, Installation and Service. Located in large Midwestern City. Franchised by top nationally known lines with some exclusive, non-competitive items. Present operating personnel including top management will remain if desired. Consistent earnings record over many years. Cash requirement approximately $100,000.00 can be returned from profits in two years.

Box No. 2739
Air Conditioning & Refrigeration News

AVAILABLE FOR IMMEDIATE SHIPMENT, NEW SEEGER REACH-IN REFRIGERATORS IN ORIGINAL FACTORY CRATES
(LIMITED QUANTITIES)
Model SCD-30 (30 Cu. Ft.) With Blower Coil
Model SCDM-30 (30 Cu. Ft.) With Ice Maker Coil

Complete with Hermetic Kelvinator Compressors Assembled—Ready to Operate
Competitive List Prices—Liberal Dealer Discounts
Write for Prices and Complete Details

L. M. ROSS — Suite 406
540 NORTH LAKE SHORE DRIVE, CHICAGO 11, ILL.

OFF THE CHEST

OPERATING SERVICE FIRM IN HOME MEETS TROUBLE

55 Irving Ave.
Brooklyn, N. Y.

Editor:

This may be an interesting story for your readers and the industry.

In February, 1947 an inspector for the fire department paid me a visit and stated that the department was making out applications for permits to maintain a refrigeration repair shop—fee would be about $10 a year. I made out my application on Feb. 13, 1947.

In October an inspector from the Department of Housing & Building paid me a visit and examined premises; spoke to me about the different refrigerants I used—I explained I use "Freon-12," methyl chloride, and sulphur dioxide. I loaned him Master Service Manual No. 1 to show him the characteristics of the different types of refrigerants.

On Oct. 23 I received an order which reads, "Discontinue, until a written permit has been obtained from the Fire Department, the use of the first story store, for refrigerator repair and refrigerants."

I went to the Department of Housing & Building and asked them what was so dangerous about my type of work and what section 12 meant. (My landlord also received same copy as I did.) I asked if they had the law they were referring to printed. Answer was no, go to Public Library and look it up.

I opened up business in January, 1945; registered trade name in May, 1945—paid occupancy tax since then; city sales tax also registered in June, 1945.

After asking them those questions about the law, I received the second notice Oct. 28, 1947—same subject.

I went to Department of Combustibles and was told that they would issue the permit, but Department of Housing & Building wouldn't OK it.

Spending more time, I found out that it was the Multiple Dwelling Law that they were referring to. I showed them the new pamphlet I received from Du Pont on the characteristics of refrigerants and explaining that the Government had all their refrigeration and air conditioning equipment with "Freon-12." I was told it still was toxic. That shut me up quick as I knew it couldn't be argued by me as I was only an individual and they had the main say so.

It seems so strange, after being established for three years I suddenly became dangerous to the community by conducting my trade and business. There are two or three friends of mine in same business and have three 90 lb. drums of gases and receive permits to conduct their business, while I only have three service drums, two 10 lb., and one 6 lb. drum, and still cannot conduct my repair work.

To top it off my landlord after three years of occupancy sends me a lawyer's letter in which he threatens to dispossess me for conducting my refrigeration work in my living quarters.

What violation? Of trying to establish and build up a business of being a reliable refrigerator serviceman? Of pursuing my trade—supporting my family and trying to keep a roof over their heads—(without City relief)? Of paying taxes and contributing to charitable institutions and affairs?

ALBERT ANDREW MILLER

Answer: Unfortunately, in a problem like this involving the matter of whether or not your business can be considered dangerous or a fire hazard, the decision is pretty much in the hands of the local authorities. Have you considered contacting the Refrigeration and Air Conditioning Guild?

DISAPPEARING DEC. 22 ISSUE HINTS FOUL PLAY

Roth Appliance Distributors, Inc.
Milwaukee, Wis.

Editor:

We, too, would be very much pleased to have your permission to reprint the article appearing in the Dec. 22 issue entitled "Waistlines Will Be Leaner in 1948 for People Who Don't Own Home Freezers."

You will note from our letterhead that we are distributors for Norge products and are very much interested in using this article to promote the sale of freezers with our dealers and through our dealers to the customer.

We would appreciate it if you would send us a tear sheet of this article. We regret to state that at this moment we are unable to locate our Dec. 22 issue. No doubt, its disappearance has something to do with the above mentioned article. One of our men must relaize its true value. We on the other hand, would like to share it with everyone.

FRANK P. BLAISDELL,
Manager, Norge Division

'WAISTLINES' EDITORIAL WILL NOT GO TO WASTE

Norge
670 East Woodbridge St.
Detroit, Mich.

Editor:

The editorial "Waistlines Will Be Leaner in 1948 for People Who Don't Own Home Freezers" was read with a great deal of interest and we would like to obtain 200 reprints of it.

Would you please see to it that these are forwarded to me as quickly as possible? Also, please bill me for any expense incurred in this matter.

J. W. WEBSTER,
Acting Central Regional Manager

STATISTICAL CLEARING HOUSE NEEDED BY TRADE

Hussmann Refrigeration, Inc.
2401 North Leffingwell
St. Louis, Mo.

Editor:

With further reference to the matter of adequate statistics for the commercial refrigerator industry, I can only suggest that the answer probably lies in having the various associations clear statistical information through one point for analysis and distribution.

No doubt, there is duplication on statistics reported to the various associations by manufacturers belonging to more than one association. It should be possible to clarify this by having each manufacturer to indicate on his report whether or not the same information is being given to some other association and, if so, to which one.

No doubt, there are many manufacturers who do not belong to an association, but it should not be too difficult to determine who such manufacturers are and also to arrive at some estimate of the volume which they do on various types of products. It would then be possible to project accurate statistics on manufacturers reporting, and to these figures could be added a reasonable estimate of the production of manufacturers outside of the associations.

This whole matter probably boils down to the question of whether or not there is some one who is capable of selling the program to the entire industry and willing to follow through to set up the necessary machinery for collecting, analyzing, and publishing the final reports. Do you know such a man?

W. J. STELPFLUG,
Vice President

PANEL COOLING JOB IS LEOPOLD INSTALLATION

Charles S. Leopold
213-15 South Broad St.
Philadelphia, Pa.

Editor:

Re your issue of Feb. 16, about Panel Cooling. . . . "A test installation of such a system is already under way in a part of Radio City, it is reported." It happens to be my installation and has been in operation, under completely automatic control, since last summer. A great many people at the Show had an opportunity to see it, although you obviously missed it.

I am particularly unhappy with the fact that your statement on the installation was coupled so closely with the name of an engineer in New York who is investigating panel cooling . . . may I add, so is everyone else? In other words, I don't mind being ignored, but don't give my work to someone else.

Just in case your memory needs refreshing, I presented a basic paper on panel cooling at the last Spring meeting of A.S.R.E., one which indicated that you could do do a great deal more work with a panel than had previously been considered, which ought to interest you due to its commercial significance.

CHARLES S. LEOPOLD

P.S.: Boo!

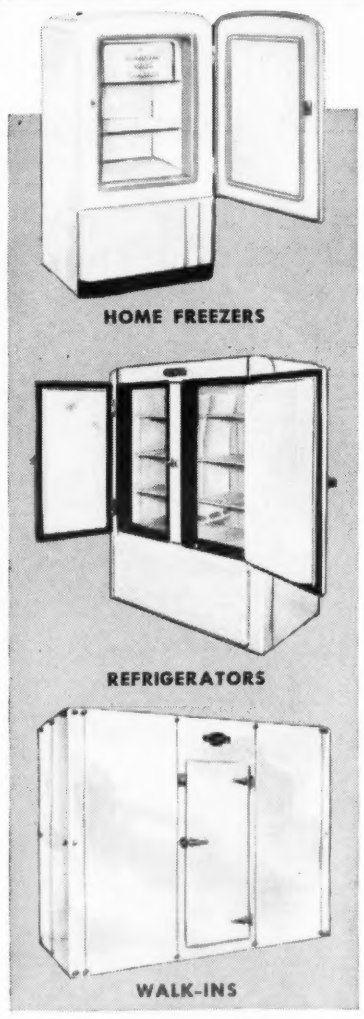
MORE PROFITS

- Use genuine Grunow parts
- Cut call-backs by 50%
- Immediate delivery

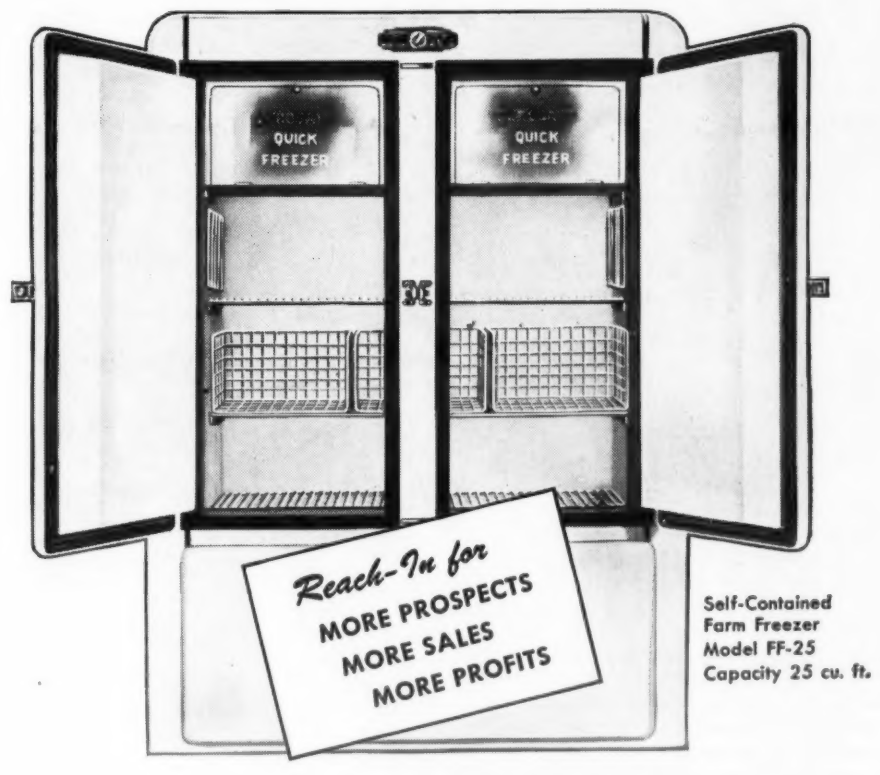
GRUNOW
AUTHORIZED SERVICE, INC.
4313 W. Fullerton Ave., Chicago, Illinois

Bowen
REFRIGERATION SUPPLIES, INC.
Atlanta Jacksonville
Tampa Miami Charlotte
"The South's Largest Refrigeration Supply Jobber"

KRACK
ENGINEERED
UNIT COOLERS
FIN COILS
AIR CONDITIONING
Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.



Build Your Reputation!



Self-Contained
Farm Freezer
Model FF-25
Capacity 25 cu. ft.

WILSON ZEROSAFE

No other line of freezers or refrigerators offers so many sales advantages. The entire Wilson line features *Reach-In* design, and is backed by nearly a decade of proven reliable performance.

There is a Wilson size for every use: homes, farms, commercial establishments and institutions. Wilson self-contained freezer models range in capacity from 6.6 cu. ft. to 25 cu. ft.; sectional models from 22 cu. ft. to 120 cu. ft.

features

- Reach-In Design
- Extra Insulation
- White Dulux Finish
- All-Steel Welded Cabinet
- Quick Contact Freezing Compartment
- Requires Small Floor Space

Copyright 1948 Wilson Refrigeration, Inc.

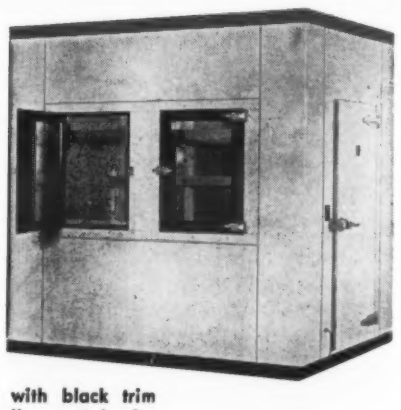
WILSON
REFRIGERATION, INC.
DIVISION OF WILSON CABINET CO., INC.
SMYRNA, DELAWARE

Franchises
Some attractive franchises are still available. Write or wire today to Dept. 12.

MIRACOOL WALK IN COOLERS

Efficient

These custom-made sectional steel or wood Walk-In Coolers are engineered to give the utmost in efficient performance. Easily and quickly erected, they are adaptable to all purposes. By adding sections or re-arranging doors or walls, they can easily be enlarged or reconstructed.



Exterior of cooler finished in lustrous white with black trim on two sides. Standard equipment: quarter rails, meat hooks, one shelf, floor racks, and chrome plated rail and hooks behind glazed service doors.

Write for new illustrated folder and price list.

The CLEVELAND REFRIGERATOR CO.
2901 EAST 65th STREET . . . CLEVELAND 4, OHIO
Manufacturers of Custom-Built Refrigerators Over A Quarter Century

To Direct Sales

C. S. STACKPOLE

* * *

Stackpole To Airtemp--

(Concluded from Page 1, Column 4)

ferred to the Virginia Electric & Power Co. as sales manager of the Norfolk district.

He was promoted to divisional manager at Richmond, but left in 1928 to accept a position as assistant manager of merchandising with Consolidated Gas Electric Light & Power.

He is a vice president and chairman of the Residential Section of the American Gas Association, vice president of the Sales Executive Council of Baltimore, and a member of the A.S.R.E.

Nera Report Shows--

(Concluded from Page 1, Column 5)

Ranges (electric)
76% average 7 per dealer
24% reported no inventory
Ranges (gas)
56% average 6 per dealer
44% reported no inventory
Refrigerators
84% average 8 per dealer
16% reported no inventory
Vacuum Cleaners
93% average 9 per dealer
7% reported no inventory
Washers (conventional)
88% average 9 per dealer
12% reported no inventory
Washers (automatic)
61% average 7 per dealer
39% reported no inventory
Water Heaters (electric)
70% average 6 per dealer
30% reported no inventory
Water Heaters (gas)
34% average 8 per dealer
66% reported no inventory

The inventory facts for March, to be released after March 15, will show in addition more individual major appliances.

Beginning in April, Inventory Facts will list small appliances, products usually stocked but not available, and products dealers plan to add to their stock.

Youngstown Franchises--

(Concluded from Page 1, Column 3)

Co., maker of the Youngstown kitchen, has warned Youngstown distriubtors.

"We simply will not permit tie-in sales. The first time we hear—and we have ways of finding out—that a dealer must buy off-brand radios, appliances, or other merchandise in order to get Youngstown equipment, that distributor is going to lose his franchise," Morrow stated.

Replacement Market Is Sizable on Oil Burners

DETROIT — Existence of a sizable replacement market for manufacturers of oil burners is indicated by V. W. Blackney, assistant general manager of sales, United States Radiator Corp., who reports that the industry's 1947 volume totaled only 70,000 oil burner replacements as compared with 670,000 new installations.

Replacement volume of oil burners, like that of other mechanical heating equipment, should possibly approximate a 1 to 3 ratio of oil burner replacements to new installations, Blackney said.

Goddard-Hottel Corp. In New Capital Quarters

WASHINGTON, D. C. — Goddard-Hottel Corp., refrigeration, air conditioning, and heating contractors, distributors, and engineers, has moved to 1200 Fifteenth St. N.W., Washington 5, D. C.

The firm distributes the products of Cyclotherm Corp., Drayer-Hanson, Inc., Frick Co., Iceberg Refrigerated Locker Systems, Inc., Revco, Inc., Union Iron Works, and United States Air Conditioning Corp.

Dealers Sell Puro--

(Concluded from Page 1, Column 3)

Pittsburgh, San Francisco, St. Louis, and Youngstown.

Anywhere else, however, appointed dealers will be able to buy Puro water coolers for outright sale or installation on a rental-service contract.

Puro itself, officials said, has always operated primarily on a service contract basis. They encouraged dealers who have the proper servicing facilities to do the same.

The company is prepared to assist dealers with service manuals and advertising and sales promotion aids wherever the scope of the local operation warrants this help.

The change in the company's policy will be announced through trade journal advertising and direct mail to selected dealers in all parts of the country, officials declared.

Contractor Separates Service, Installation

CINCINNATI — Expansion and growth of the business of Smith & Lowman, Inc., distributor of Chrysler Airtemp products, has required the separation of the service and installation departments.

Nelson C. Browning, who has had nine years' experience with Chrysler Airtemp products, has been appointed service manager, and Richard H. Yingling, formerly of Columbus, Ohio, has been named installation chief.

Other new personel includes Edward A. Dixon, in charge of wholesale heating sales, and Wilbur Hannah as head of the parts and warehousing division.

In USAirco Posts

L. P. Hanson

C. S. Kessler

* * *

(Concluded from Page 1, Column 4)

quently promoted to chief engineer and during the war was in charge of the corporation's manufacturing program for the U. S. Navy and the Merchant Marine.

Feinberg also announced three additional personnel changes affecting the executive staff of the corporation. These were the appointment of Harold Goodman, as assistant to the president; Raymond A. Nelson, as sales representative for the company in the Twin Cities, and C. S. Kessler as manager of the service organization.

Climate Institute To Discuss Effect of Code

DETROIT — How various Detroit city codes affect the design and installation of heating plants will be discussed before the Detroit chapter of the Indoor Climate Institute by Walter Jenkins, senior assistant mechanical engineer of the Detroit Bureau of Safety Engineering, at a meeting 8 p.m. Friday, March 19, at the Rackham Educational Memorial.

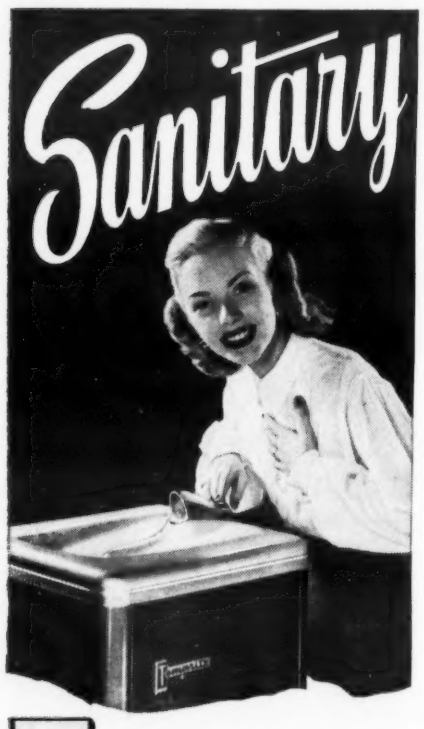
WANTED
CHIEF REFRIGERATION ENGINEER

Nationally known California Manufacturer of Commercial Refrigeration has opening for an experienced Chief Engineer capable of assuming the responsibility of a complete Engineering Department, including mechanical and design development. Write, giving full details of qualifications and salary wanted to

Box 2732, Air Conditioning & Refrigeration News

DISTRIBUTORS
REFRIGERATION-HEATING PARTS AND SUPPLIES
We carry a stock to fill large and small orders. Fully equipped to handle export shipments.
Automatic
HEATING & COOLING SUPPLY
DIVISION OF WEIL-McLAIN COMPANY
647 W. Lake St., Chicago 6, Ill.
Branch—809 West 74th St., Chicago, Ill.
March 1, 1948 Discount Sheet and Supplement Mailed on Request.

Sanitary



TEMPRITE
DRINKING WATER COOLERS

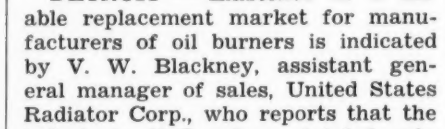
1. Bubbler design gives maximum sanitary protection. **2.** Smart, streamlined styling blends harmoniously into all surroundings. **3.** Effortless finger-tip pressure produces a steady stream of perfect-temperature drinking water. **4.** No spouting, no splashing, no annoying fluctuations in water flow.

User Protected by Temprite's 5-Year Warranty Plan

All models meet requirements of the National Bureau of Standards and Underwriters Laboratories, Inc.

Manufacturers of water cooling equipment since 1929.
TEMPRITE PRODUCTS CORP.
43 PIQUETTE AVE. DETROIT 2, MICH.

REMCO *"Liquid-Fin"*
HEAT EXCHANGERS



LIQUID flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high. No. 4

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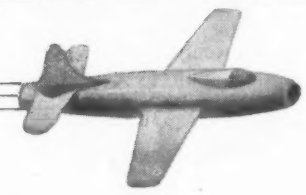
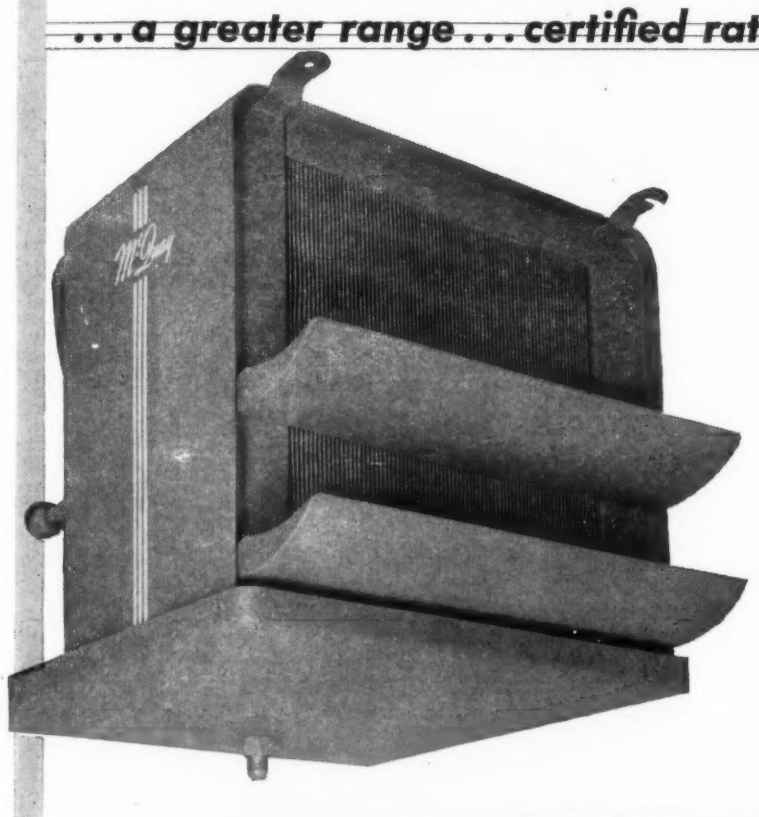
Marlo
Products
MARLO = HEAT TRANSFER
Since 1925

. . . a greater range . . . certified ratings





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UNIT COOLERS

10 MODELS 900-28,500 BTU CAPACITY

New sizes and capacities with certified ratings per proposed standard REMA code give a widely increased range to McQuay's Unit Coolers. Designed for average fixture temperatures above 35° F., the Pacemaker line meets refrigeration requirements from back-bars to walk-ins. Pacemaker units incorporate exclusive Ripple-Fin coils with aluminum fins locked permanently to copper tubes by hydraulic expansion. Rippled inside tube surfaces assure proper turbulence of the refrigerant—maximum refrigerating effect. Pacemaker coolers have die-formed cabinets and fan shrouds, are equipped with quiet, long life motors. Heat exchangers are provided in models of 1,850 BTU capacity and over.

● Other widely used equipment manufactured by McQuay includes display case coils in practically limitless sizes and capacities and panel type Chillators especially designed for reach-in and low ceiling walk-in applications. See your refrigeration wholesaler, or write McQuay, Inc.

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DISPLAY CASE COIL

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